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ANNUAL REPORTS, WAR DEPARTMENT
FISCAL YEAR ENDED JUNE 30, 1908

REPORT OF THE

SURGEON-GENERAL

U. S. ARMY

TO THE SECRETARY OF WAR

1908

WASHINGTON
GOVERNMENT PRINTING OFFICE
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LETTER OF SUBMITTAL.

War Department,
Office of the Surgeon-General,
Washington, September 14, 1908.

Sir: I have the honor to submit herewith a report upon the work of the Medical Department of the Army, beginning with a financial statement for the fiscal year ending June 30, 1908, and including a study of the health and sanitary conditions of the Army for the calendar year 1907.

Very respectfully,

R. M. O'Reilly,
Surgeon-General U. S. Army.

Hon. Luke E. Wright,
Secretary of War.

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FINANCIAL STATEMENT, 1908.[a]

Medical and hospital department, 1908.

Appropriated by act approved March 2, 1907		$644,286.00
Proceeds of private laundry work done for sanitary reasons at the Medical Department steam laundry, Manila, P. I.	[b] $2,445.40	
Transfer to this head made by the Treasury Department on account of army medical supplies furnished to the Immigration Service (subsequently retransferred to the proper head, "Replacing medical supplies, 1908–9," as per counter entry below)	359.92	
Transfers to this head made by the Treasury Department to correct disbursing errors, from "Medical and hospital department, 1907"	65.93	
Other refundments during the year	551.72	
		3,422.97
Total to be accounted for		647,708.97
Disbursed during the year:		
Expenses of medical-supply depots	752.05	
Medical and hospital supplies	397,072.97	
Medical attendance and medicines (except at recruiting stations)	11,694.33	
Medical expenses of recruiting (including medical attendance and medicines at recruiting stations)	11,841.20	
Pay of nurses	1,267.50	
Pay of other employees	154,794.59	
Laundering of hospital linen	30,153.64	
Expressage	125.81	
Notary fees	43.36	
Telephone service, Medical Department steam laundry, Manila	30.00	
Gas and electricity for medical apparatus	292.22	
		608,067.67
Transfer by Treasury settlement to "Replacing medical supplies, 1908–9," being counter transfer to correct error above shown		359.92
Balances on hand June 30, 1908:		
In United States Treasury and in transit thereto	13,046.62	
In hands of disbursing officers—		
New York City	10,505.89	
Washington, D. C.	7,698.21	
St. Louis, Mo.	2,193.91	
San Francisco, Cal.	590.39	
Habana, Cuba	575.98	
Manila, P. I.	4,670.38	
		39,281.38
Total accounted for		647,708.97

[a] The disbursements in this statement include settlements with public creditors made by the accounting officers of the Treasury, and charged by them to these appropriations.

[b] These proceeds are in course of transfer to "Miscellaneous receipts," under a decision made by the Comptroller of the Treasury on July 7, 1908, and are not available for disbursement.

Medical and hospital department, 1907.

Balance on hand July 1, 1907, act of June 12, 1906		[a] $47,490.29
Refundments during the year (including transfers to this head from "Medical and hospital department, 1906," to correct disbursing errors, $112)		130.49
Total to be accounted for		47,620.78
Disbursed during the year:		
Expenses of medical supply depots	$129.65	
Medical and hospital supplies	30,297.71	
Medical attendance and medicines (except at recruiting stations)	3,108.33	
Medical expenses of recruiting (including medical attendance and medicines at recruiting stations)	1,253.39	
Pay of nurses	100.00	
Pay of other employees	8,893.96	
Laundering of hospital linen	2,493.05	
Expressage	22.40	
Notary fees	2.28	
Gas and electricity for medical apparatus	35.30	
		46,336.07
Transfers by Treasury settlements to correct disbursing errors:		
To "Medical and hospital department, 1908"	65.93	
To "Medical and hospital department, 1906"	56.00	
		121.93
Balances on hand June 30, 1908:		
In United States Treasury	739.90	
In hands of disbursing officer, Washington, D. C.	422.88	
		1,162.78
Total accounted for		47,620.78

Medical and hospital department, 1906.

Balance on hand July 1, 1907, act of March 2, 1905		$6,751.93
Refundments during the year (including transfers to this head from "Medical and hospital department, 1907," to correct disbursing errors, $56)		63.70
Total to be accounted for		6,815.63
Disbursed during the year:		
Medical and hospital supplies	$1,366.29	
Medical attendance and medicines (not at recruiting stations)	62.00	
		1,428.29
Transfers by Treasury settlements to "Medical and hospital department, 1907," to correct disbursing errors		112.00
Balance in United States Treasury June 30, 1908, for surplus fund [b]		5,275.34
Total accounted for		6,815.63

Medical and hospital department, 1905 and prior years.

Refundments during the year (proceeds of private laundry work done for sanitary reasons at the Medical Department steam laundry, Manila, P. I., prior to July 1, 1905)	$2,399.59
Balance in United States Treasury June 30, 1908, for surplus fund	2,399.59

[a] In my last annual report the balance under this appropriation, while complete to June 30, 1907, at all other places, was brought up only to May 31 at Manila. The balance reported in this wise for May 31 and June 30 was $50,244.20. Disbursements at Manila during June, 1907, were $2,753.91, leaving a final balance of $47,490.29 on June 30, 1907.

[b] At date of this compilation, August 25, 1908, the surplus-fund warrant for June 30, 1908, has not been received for note in the Surgeon-General's Office.

Medical and hospital department, certified claims.

Appropriated by act approved May 30, 1908		$7.50
Disbursed during the year		7.50

Replacing medical supplies, 1908–9 (act June 12, 1906—34 Stats., 256).

Amounts accruing to this fund:		
A. On account of supplies transferred—		
To Immigration Service	$1,261.05	
To Forest Service	85.00	
To Navy	3,094.30	
To Engineer Department, U. S. Army	.85	
To Quartermaster's Department, U. S. Army	381.67	
To Isthmian Canal Commission	10,139.33	
To States and Territories for use of militia	14,309.75	
		$29,271.95
B. On account of supplies sold—		
To States for use of militia	902.62	
To civil government, Philippine Islands	481.38	
To civilian employees and civilians	1,891.46	
		3,275.46
C. On account of collections from carriers and others for medical property lost or destroyed		480.45
D. On account of laundering by the Medical Department for the Engineer Department, U. S. Army		1.54
Total to be accounted for		33,029.40
Balance on hand in United States Treasury June 30, 1908		33,029.40

Replacing medical supplies, 1907–8.

Balance on hand July 1, 1907		$49,636.05
Amounts accruing to this fund:		
A. On account of supplies transferred—		
To Immigration Service	$1,252.32	
To Bureau of Education	5.25	
To Navy and Marine Corps	496.86	
To Quartermaster's Department, U. S. Army	4.47	
To Isthmian Canal Commission	7,312.78	
To States and Territories for use of militia	463.98	
		9,535.66
B. On account of supplies sold to civilian employees and civilians		400.82
C. On account of collections from carriers and others for medical property lost or destroyed		1,359.53
Total to be accounted for		60,932.06
Disbursed during the year		58,658.70
Balances on hand June 30, 1908:		
In hands of disbursing officer, Washington, D. C.	$1,775.65	
In hands of disbursing officer, New York, N. Y.	497.71	
		2,273.36
Total accounted for		60,932.06

Field medical equipment.

Appropriated by act approved May 11, 1908	$200,000.00
Balance in United States Treasury June 30, 1908	200,000.00

Artificial limbs, 1908.

Appropriated by act approved March 4, 1907		$120,000.00
Disbursed during the year		96,939.44
Balances on hand June 30, 1908:		
In United States Treasury	$19,948.56	
In hands of disbursing officer, Washington, D. C.	3,112.00	
		23,060.56

Artificial limbs, 1907.

Balance on hand July 1, 1907, act of June 30, 1906	$15,329.52
Disbursed during the year	5,208.96
Balance on hand June 30, 1908, in United States Treasury	10,120.56

Artificial limbs, 1906.

Balance on hand July 1, 1907, act of March 3, 1905	$18,417.52
Disbursed during the year	196.47
Balance in United States Treasury June 30, 1908, for surplus fund	18,221.05

Appliances for disabled soldiers, 1908.

Appropriated by act approved March 4, 1907		$2,000.00
Disbursed during the year		1,213.76
Balances on hand June 30, 1908:		
In United States Treasury	$500.00	
In hands of disbursing officer, Washington, D. C	286.24	
		786.24

Appliances for disabled soldiers, 1907.

Balance on hand July 1, 1907, act of June 30, 1906	$830.21
Disbursed during the year	73.60
Balance in United States Treasury June 30, 1908	756.61

Appliances for disabled soldiers, 1906.

Balance on hand July 1, 1907, act of March 3, 1905	$633.06
Balance in United States Treasury June 30, 1908, for surplus fund	633.06

Army Medical Museum, 1908.

Appropriated by act approved March 2, 1907		$5,000.00
Disbursed during the year		3,410.42
Balances on hand June 30, 1908:		
In United States Treasury	$1,240.95	
In hands of disbursing officer, Washington, D. C	348.63	
		1,589.58

Army Medical Museum, 1907.

Balance on hand July 1, 1907, act of June 12, 1906	$1,789.65
Disbursed during the year	1,780.12
Balance in United States Treasury June 30, 1908	9.53

Army Medical Museum, 1906.

Balance on hand July 1, 1907, act of March 2, 1905	$33.59
Balance in United States Treasury June 30, 1908, for surplus fund	33.59

Library, Surgeon-General's Office, 1908.

Appropriated by act approved March 2, 1907		$10,000.00
Disbursed during the year		5,839.84
Balances on hand June 30, 1908:		
In United States Treasury	$2,000.00	
In hands of disbursing officer, Washington, D. C	2,160.16	
		4,160.16

Library, Surgeon-General's Office, 1907.

Balance on hand July 1, 1907, act of June 12, 1906	$3,267.55
Disbursed during the year	3,058.57
Balance in United States Treasury June 30, 1908	208.98

Library, Surgeon-General's Office, 1906.

Balance on hand July 1, 1907, act of March 2, 1905	$355.29
Disbursed during the year	15.25
Balance in United States Treasury, June 30, 1908, for surplus fund	340.04

Furnishing trusses to disabled soldiers (secs. 1176, 1177, and 1178, R. S., and act of Mar. 3, 1879).

Balance on hand July 1, 1907	$1,093.07
Drawn during the year	6,003.00
Total to be accounted for	7,096.07
Disbursed during the year	4,595.70
Balance in hands of disbursing officer, Washington, D. C., June 30, 1908	2,500.37
Total accounted for	7,096.07

General summary of all appropriations.

Balances on hand July 1, 1907	$145,627.73
Appropriated	987,296.50
Proceeds of sales, etc., accruing to replacing funds, act June 12, 1906 (34 Stats., 256)	44,325.41
Refunded during the year	5,422.90
Total to be accounted for	1,182,672.54
Disbursed	836,830.36
Balances in United States Treasury June 30, 1908, for surplus fund	26,902.67
Balances on hand for disbursement June 30, 1908	318,939.51
Total accounted for	1,182,672.54

THE ARMY.

Troops were stationed in the United States proper, the Philippine Islands, Alaska, Cuba, and Hawaii during the past year, while native troops served in Porto Rico and the Philippines.

Statistics for the native troops—Porto Rican and Filipino—have been separately compiled, and when reference is made to the "Army" in this report the American Army proper, white and colored troops, is meant.

As in many diseases, notably the venereal and malarial, the same soldier is often admitted several times on account of the same case of illness, the total number of admissions is necessarily considerably greater than the actual number of cases. The extent of this discrepancy, total 7.09 per cent, is shown in the following table, in which, however, only those diseases are shown where the difference between admissions and cases was 10 or more.

	Admissions and cases (men) compared.			
	Admissions.	Cases (men).	Excess of admissions over cases.	Percentage of admissions deducted to show cases.
Malarial fevers	3,395	3,018	377	11.10
Influenza	2,177	2,094	83	3.81
Dysentery	704	603	101	14.35
Dengue	990	961	29	2.93
Vaccinia	1,855	1,805	50	2.70
Tuberculosis (all)	277	264	13	4.69
Syphilis	1,556	1,321	235	15.10
Chancroid	2,389	2,200	189	7.91
Gonorrhea and other venereal	6,634	5,782	852	12.84
Articular rheumatism:				
Acute	410	359	51	12.44
Subacute and chronic	294	260	34	11.56
Alcoholism	1,867	1,526	341	18.26
Epilepsy	122	91	31	25.41
Neuralgia	417	393	24	5.76
Conjunctivitis, acute	406	393	13	3.20
Diseases of the middle and internal ear	415	382	33	7.95
Varicose veins	87	71	16	18.39
Hemorrhoids	446	424	22	4.93
Adenitis, nonvenereal	363	325	38	10.47
Functional disease of the heart	134	119	15	11.19
Coryza	1,147	1,118	29	2.53
Acute bronchitis	2,381	2,287	94	3.95
Asthma	136	70	66	48.53
Diseases of the teeth, gums, and alveoli	510	482	28	5.41
Tonsillitis	2,708	2,567	141	5.21
Dyspepsia	1,658	1,578	80	4.83
Gastritis	765	716	49	6.41
Diarrhea, acute	2,060	1,942	118	5.73
Enteritis	553	527	26	4.70
Inguinal hernia	200	187	13	6.50
Constipation	1,232	1,174	58	4.71
Appendicitis and abscess of iliac fossæ	268	253	15	5.60
Orchitis, nonvenereal	155	143	12	7.74
Furuncle	1,580	1,342	238	15.06
Acute abscess, phlegmon	1,007	942	65	6.45
Corns and warts	280	261	19	6.79
Ingrowing nails	243	232	11	4.53
Dermatitis from poisonous plants	270	253	17	6.30
Eczema and pemphigus	202	175	27	13.37
Dhobie itch	234	215	19	8.12
Arthritis	61	51	10	16.39
Synovitis	156	137	19	12.18
Muscular rheumatism and myalgia	1,520	1,385	135	8.88
Febricula (simple, continued, and other undetermined fevers)	447	434	13	2.91
Debility following operation and disease	181	158	23	12.71
Sprains	2,431	2,320	111	4.57
Strain, muscular	584	571	13	2.23
Abrasions and blisters (mechanical)	1,101	1,039	62	5.63
Contusions	2,518	2,398	120	4.77
Wounds:				
Incised	876	859	17	1.94
Lacerated	1,005	989	16	1.59
Punctured	448	436	12	2.68
Secondary results of injuries	356	326	30	8.43
Diseases and injuries, except as shown in detail	11,335	10,939	396	3.49
Grand total	65,546	60,897	4,649	7.09
Total for disease	54,075	49,834	4,241	7.84
Total for external causes	11,471	11,063	408	3.56

HEALTH OF THE ARMY.

The mean enlisted strength of the Army, American troops, white and colored, for the year 1907, as reported on the monthly sick reports of the Medical Department, was 53,803, and on the returns of The Adjutant-General's office 54,949. The former represents the strength of the commands from which the sick returns were made and was used in calculating all ratios except those for deaths and discharges. As all

deaths and discharges were reported, even of those absent from a command, the total strength as obtained from The Adjutant-General was used in calculating ratios pertaining to those headings.

The total number of admissions to sick report was 65,546, equal to an admission rate of 1,218.26, compared with 1,276.88 for the previous year and 1,773.86 for the period from 1898 to 1905.

There were 319 deaths from all causes, equivalent to a rate of 5.81 per 1,000 of strength, compared with 6.11 and 13.91 per 1,000, the corresponding rates for the previous year and the period from 1898 to 1905, respectively.

The death rate for disease, 3.44, is slightly higher than for 1906, 3.28, but is lower than for any other year since 1897.

Eleven hundred and seven men were discharged for disability, equivalent to a rate of 20.15, as compared with 26.00 for 1906 and 23.43 for the period 1898 to 1905.

The constantly noneffective rate, 46.17, was considerably better than that for 1906, 49.79.

Venereal diseases were again by far the most important item affecting the efficiency of the Army. During the year the admission rate, 196.62, was even higher than for last year, but the noneffective rate, 12.43, was slightly lower. There were constantly on sick report for this class of diseases 668.65 men.

Next after venereal diseases in order of admission rates were malarial fevers. This class of diseases, however, shows a great improvement over the rates for the preceding year, the figures being as follows: Admissions 1906, 107.67; 1907, 63.19.

Next in order of importance were diarrhea and enteritis with an admission rate of 49.26, little more than half that for 1906; bronchitis, acute and chronic, with a rate of 47.43, slightly higher than for last year; and influenza, 40.46, about two and one-half times the rate for the preceding year.

The most important causes of deaths from disease were tuberculosis, ratio 0.53; pneumonia, 0.44; cerebro-spinal fever, 0.38; typhoid fever, 0.29; and heart disease, 0.27. All these ratios are higher than for 1906 except that for tuberculosis, which is considerably lower.

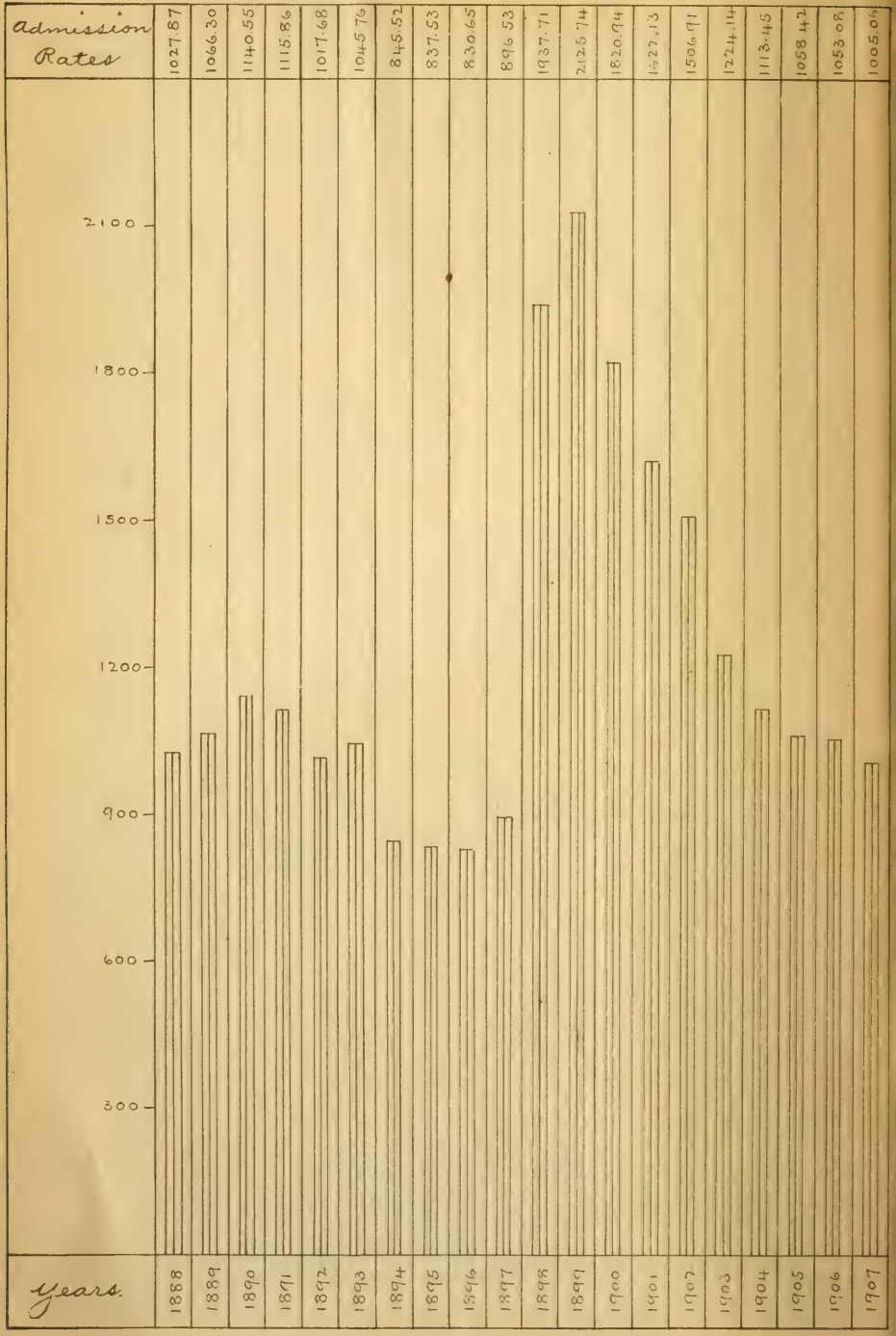
Tuberculosis led as a cause of discharge for disability with a ratio of 3.22; venereal disease was second, ratio 2.76; and insanity third, ratio 1.44.

There were 154 admissions for gunshot wounds, with 34 deaths, and 2,832 admissions for wounds other than gunshot, with 6 deaths.

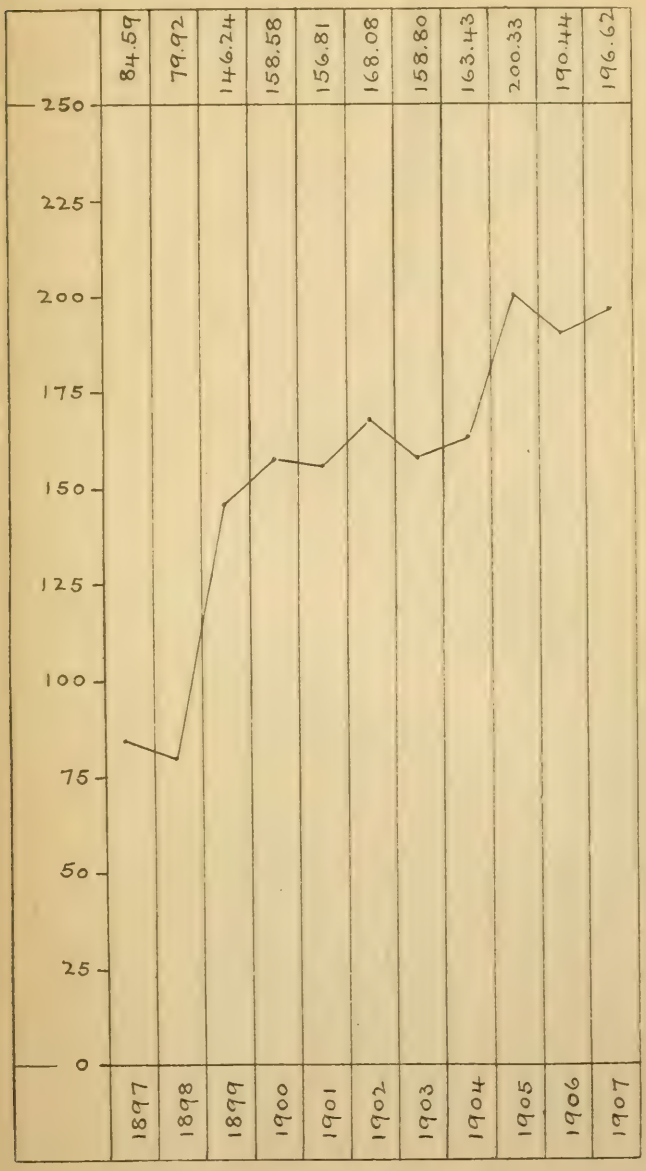
No enlisted men were killed in action during the year; one was wounded, but recovered. Thirty-nine men were drowned, 12 per cent of the deaths from all causes. There were 26 suicides, as compared with 39 in 1906, but the number of homicides in the same period increased from 9 to 17.

If we look back over the figures representing the health of the Army (diseases only) for the past twenty years, it will be seen that they can be broadly grouped into two periods of ten years each, the ten years before and the ten years after and including the Spanish-American war. This is clearly shown in the accompanying charts of the ratios for all diseases, and is indeed what might have been expected, owing to the entirely changed conditions under which the Army is now serving.

Chart showing the total admission rate for disease, by years, since 1888.

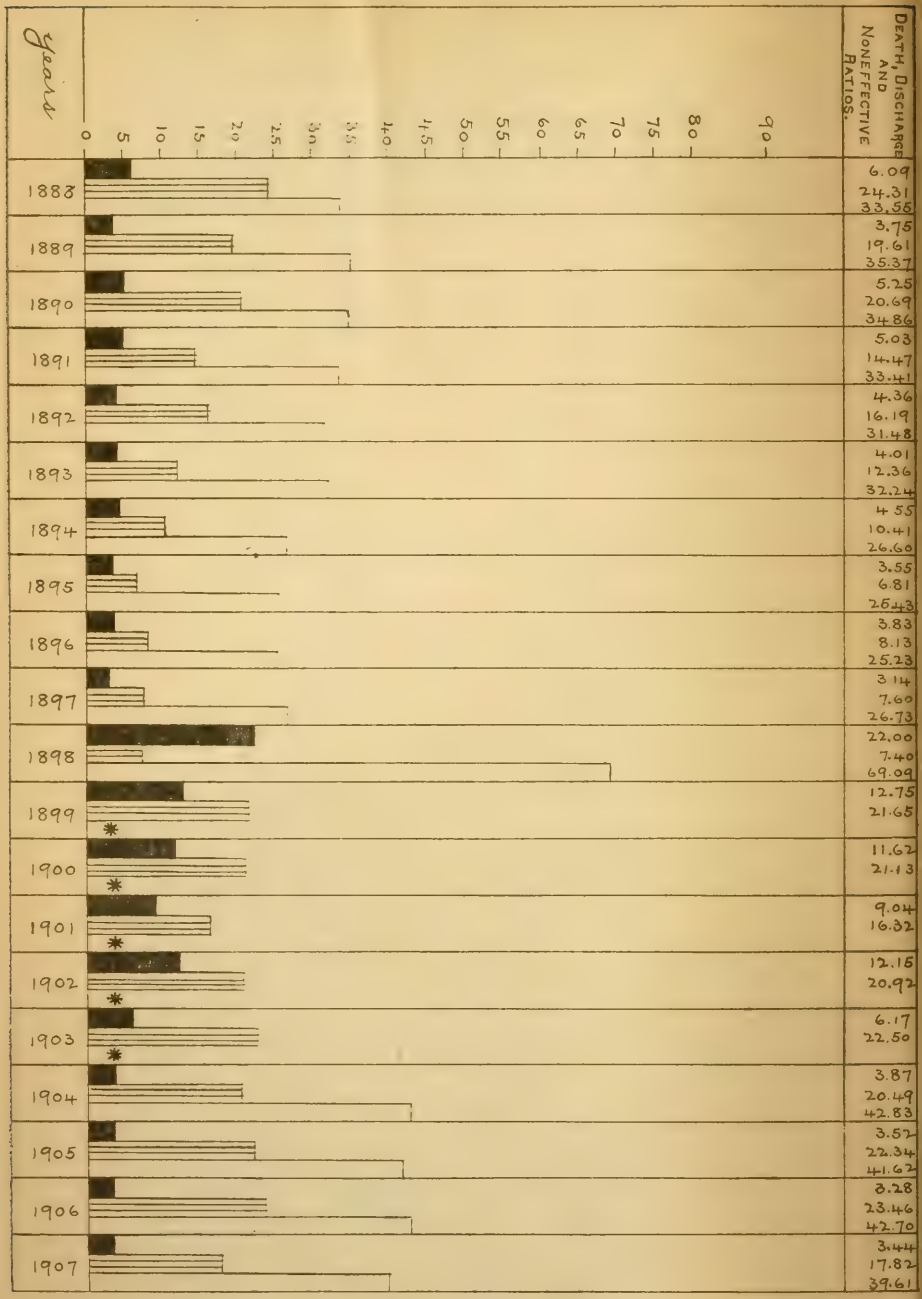


[*Chart showing the admission rates for venereal diseases since 1897.*



Scale 50 to 1 inch.

Chart showing total death, discharge, and noneffective rates for disease since 1888.



With slight fluctuations there was a practically continuous improvement in all the rates year by year during the first period, the minimum discharge for disability rate of 6.81 being attained in 1895, the minimum admission and noneffective rates of 830.65 and 25.23 in 1896, the minimum death rate of 3.14 in 1897.

In 1898, the year of the war, there was a great increase in all the rates, except discharge for disability, largely the result of the undue prevalence of malarial fevers, typhoid fever, and yellow fever. Since 1898 there has been a gradual reduction in the admission and death rates, the former being now a little more than one-half that of 1898, and the latter a little more than one-seventh. The discharge rate, while higher than for the war period, is considerably lower than for any year since 1901. The noneffective rate is also lower than for any year since 1898.

The principal factors in the increased noneffective and discharge rates following the Spanish war were the increases in venereal (two and one-half times), in tuberculosis (four times), in malaria (one and one-half times), in dysentery (twelve and one-half times) and in diarrhea (nearly twice); in all these diseases except tuberculosis the increase may be accounted for by tropical service; in the case of tuberculosis it is probably due to several factors, among which the most important are inferior character of recruits and overcrowding in barracks, though tropical service must also be included.

The great improvement in the sickness and mortality rates since 1898–99 has been principally in the group of preventable diseases, except tuberculosis and venereal. The admission rate for typhoid fever in 1907 was 3.87, the lowest of which there is any record in this office; the rate for 1906 was 6.15 and for the eight-year period 1898–1905 it was 15.65. The admission rate for malaria, also the lowest of which there is record, was 63.19, as compared with 107.67 for 1906 and 346.64 for the period 1898–1905.

The marked fall in the admission rate for typhoid is particularly gratifying, as this is the disease which in time of war most seriously threatens the efficiency of the Army. The infection is so widespread among the civilian population of the United States that cases will inevitably occur among soldiers from time to time; but strenuous efforts are being constantly made to prevent its spread. The history of numerous outbreaks in the Army shows that under service conditions contagion, direct or mediate, is the most important factor, and the measures of suppression which are proving so successful have kept this method of spread constantly in view. Upon request of this office the Army Regulations have been so amended as to specifically provide that all soldiers must thoroughly wash their hands after going to the latrines and before each meal. In time of war the difficulties in the way of controlling the factors concerned in the spread of the disease become so great that some foreign armies are endeavoring to render their soldiers immune to typhoid by means of antityphoid vaccination. A considerable measure of success has attended experiments along this line, and this office is now carefully investigating the matter to see if the method can be applied to advantage in our service.

The great improvement in the rates for malaria is also very satisfactory and fully justifies the expense which has been incurred in

Chart showing for the Army the noneffective rates for the last twenty years for the three diseases having th highest rates in 1907.

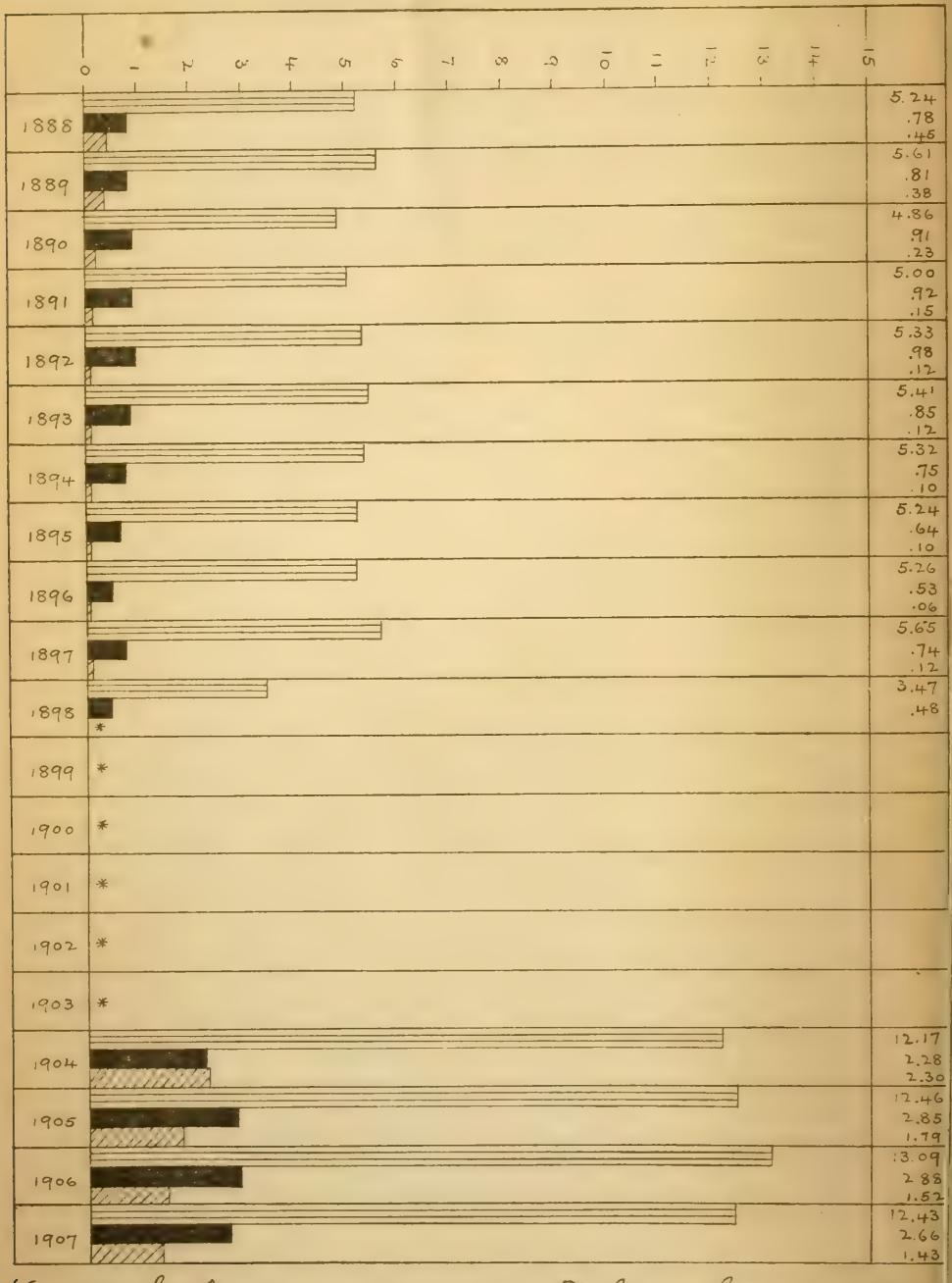


Chart showing for the Army the death rates for the last twenty years for the three diseases having the highest rates in 1907.

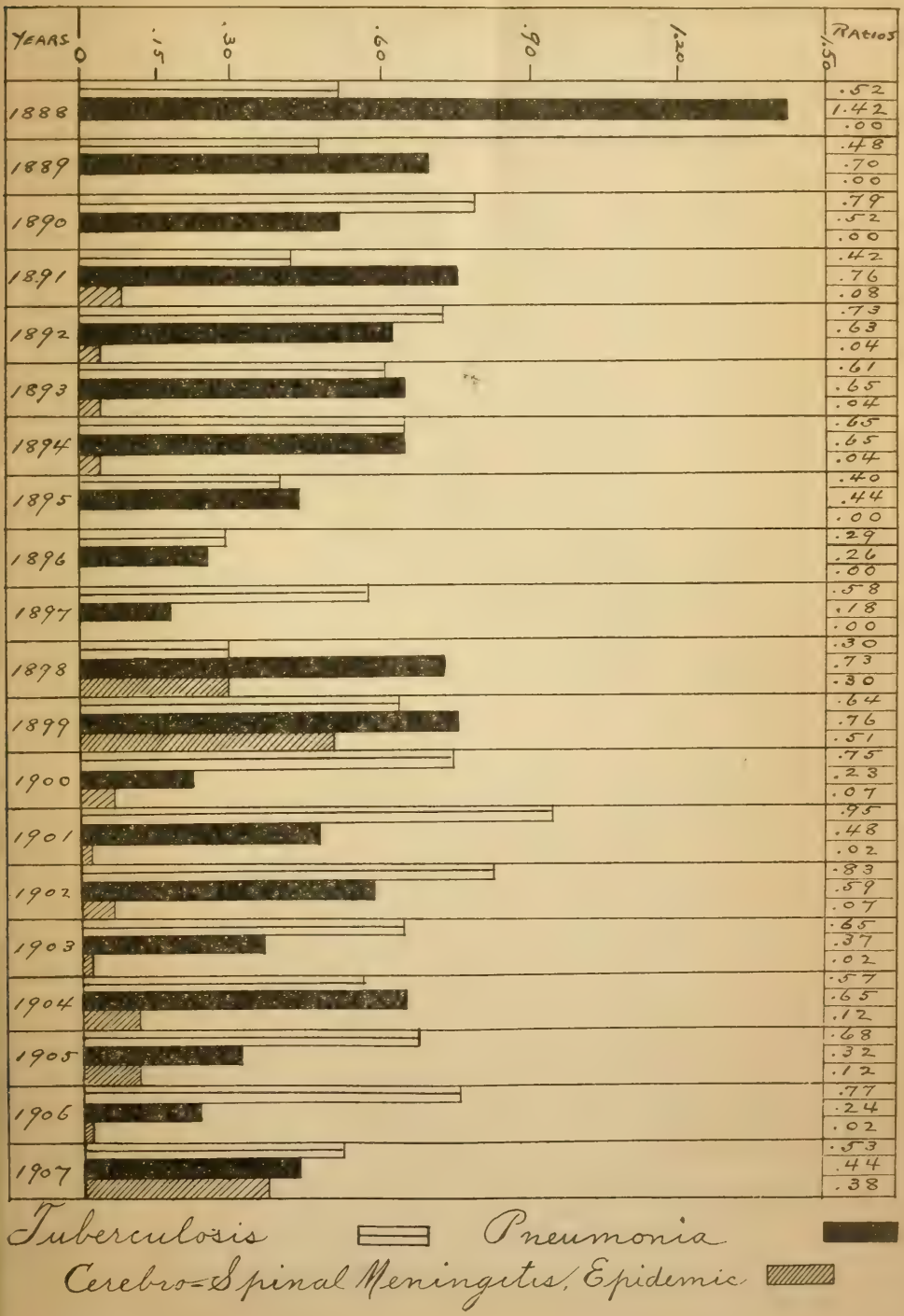
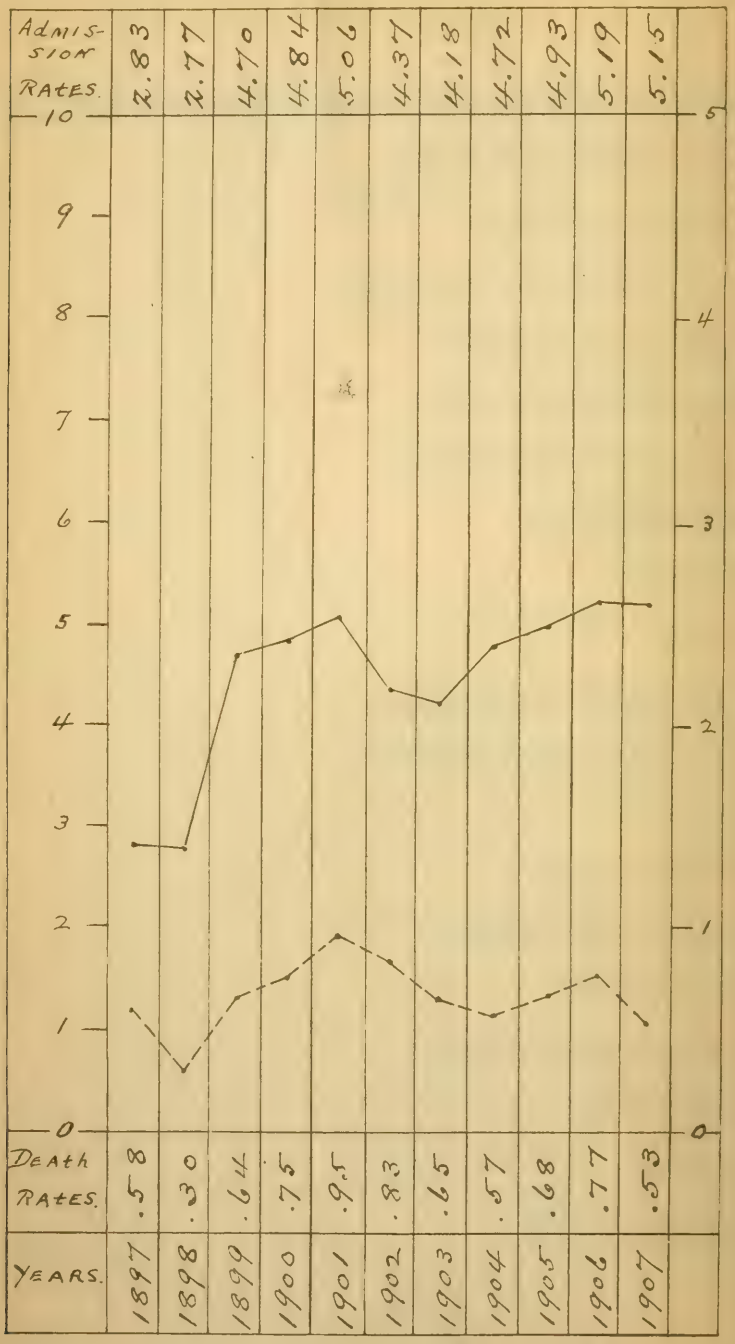


Chart showing the relative admission and death ratios per thousand of mean strength for tuberculosis in the Army, by years, since 1897.



screening, and antimosquito methods; the reduction in the sickness from malaria in the last year alone amounted to 2,390 admissions.

On the other hand, the conditions as regard to tuberculosis are unsatisfactory. While there has been a slight reduction in the rates since 1906, yet this disease in 1907 caused 18 per cent of all discharges for disability, 15 per cent of all deaths, and 6½ per cent of the total noneffective rate for disease.

The rates for tuberculosis are considerably higher for colored than for white troops, and for troops serving in the Philippines than for those serving in the United States.

In a number of instances there have been well-marked company outbreaks of the disease pointing strongly to local infection. Thus an outbreak which occurred at Camp Connell, Samar, caused 16 cases in 8 companies of the First Infantry between January 3 and December 1, 1907. The surgeon at that post reported that those companies that brought infection with them from the United States produced about 80 per cent of the cases, and that the infection spread through personal contact. That the infection was from within the regiment would seem to be proven by the fact that the Fourteenth Infantry served at the post for about two years before the arrival of the First Infantry, and had only two cases of tuberculosis, both probably infected in the United States. To combat this disease in the Army greater care will have to be exercised in the future (1) to exclude recruits who have tuberculosis in its earlier stages; (2) to prevent overcrowding in barracks and guardhouses; (3) to detect cases in the command early and remove them before they have had time to infect others; (4) to practice the most thorough disinfection after removal of each case.

The following table and charts give a summary of the health of the Army by countries:

Numerical view of the effect of disease and injury on United States troops serving at home and abroad in the year 1907 compared with corresponding data for the year 1906, by countries—Absolute numbers.

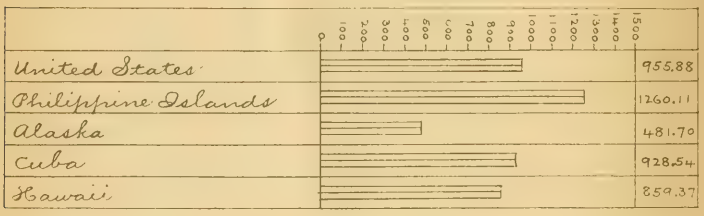
American troops (enlisted).		Mean strength.	Admitted.			Discharged on surgeon's certificate of disability.			Died.			Total losses.			Noneffective from sickness.	
			Total.	Disease.	Injury.	Total.	Disease.	Injury.	Total.	Disease.	Injury.	Total.	Disease.	Injury.	Days treated.	Constantly noneffective.
United States	1907	35,132	41,176	33,582	7,594	915	809	106	203	117	86	1,118	926	192	579,836	1,588.59
	1906	40,621	47,930	38,346	9,584	1,364	1,251	113	223	120	103	1,587	1,371	216	695,733	1,906.12
Alaska	1907	847	557	408	149	11	9	2	3	2	1	14	11	3	6,561	17.98
	1906	805	575	442	133	5	5	.....	6	4	2	11	9	2	7,014	19.22
Cuba	1907	4,436	5,165	4,119	1,046	79	72	7	25	15	10	104	87	17	63,293	173.41
	1906	1,123	1,310	1,060	250	4	4	.....	3	3	.....	7	7	.....	12,613	34.56
Philippine Islands	1907	11,699	17,351	14,742	2,609	100	87	13	81	50	31	181	137	44	236,937	649.14
	1906	12,380	21,050	18,501	2,549	143	107	36	115	57	58	258	164	94	286,271	784.30
Hawaii	1907	192	185	165	20	2	2	.....	.....	.....	.....	2	2	.....	2,482	6.80
	1906	232	234	181	53	5	5	.....	2	2	.....	7	7	.....	4,228	11.58
Army transports	1907	1,497	1,112	1,059	53	.....	.....	.....	7	5	2	7	5	2	17,641	48.33
	1906	1,282	972	909	63	2	2	.....	9	6	3	11	8	3	19,956	54.67
Total	**1907**	**53,803**	**65,546**	**54,075**	**11,471**	**1,107**	**979**	**128**	**319**	**189**	**130**	**1,426**	**1,168**	**258**	**906,750**	**2,484.25**
	1906	56,443	72,071	59,439	12,632	1,523	1,374	149	358	192	166	1,881	1,566	315	1,025,815	2,808.24
Regular Army, American troops, 1898 to 1905		64,474	914,937	804,915	110,022	12,085	10,470	1,615	7,176	5,101	2,075	19,261	15,571	3,690	.....	.....

Numerical view of the effect of disease and injury on United States troops serving at home and abroad in the year 1907 compared with corresponding data for the year 1906, by countries—Proportionate numbers.

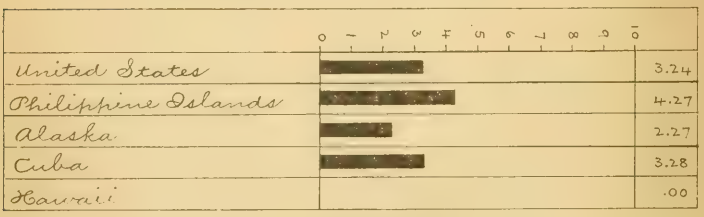
American troops (enlisted).		Mean strength.	Admitted.			Discharged on surgeon's certificate of disability.			Died.			Total losses.			Constantly noneffective.	Days treated.	
			Total.	Disease.	Injury.	Total.	Disease.	Injury.	Total.	Disease.	Injury.	Total.	Disease.	Injury.		Each soldier.	Each case.
United States	1907	35,132	1,172.04	955.88	216.16	25.36	22.42	2.94	5.63	3.24	2.38	30.98	25.66	5.32	45.22	16.50	14.08
	1906	40,621	1,179.93	943.99	235.94	32.29	29.62	2.68	5.28	2.84	2.44	37.57	32.45	5.12	46.92	17.13	14.52
Alaska	1907	847	657.62	481.70	175.91	12.47	10.20	2.27	3.40	2.27	1.13	15.87	12.47	3.40	21.22	7.75	11.78
	1906	805	714.29	549.07	165.22	5.38	5.38	.....	6.46	4.31	2.15	11.84	9.69	2.15	23.87	8.71	12.20
Cuba	1907	4,436	1,164.34	928.54	235.80	17.25	15.72	1.53	5.46	3.28	2.18	22.71	19.00	3.71	39.09	14.27	12.25
	1906	1,123	1,166.52	943.90	222.62	3.19	3.19	.....	2.40	2.40	.....	5.59	5.59	.....	30.77	6.60	9.28
Philippine Islands	1907	11,699	1,483.12	1,260.11	223.01	8.54	7.43	1.11	6.92	4.27	2.65	15.46	11.70	3.76	55.49	20.25	13.66
	1906	12,380	1,700.32	1,494.43	205.90	11.33	8.48	2.85	9.11	4.52	4.60	20.44	13.00	7.45	63.35	23.12	13.60
Hawaii	1907	192	963.54	859.37	104.17	10.42	10.42	.....	.....	.....	.....	10.42	10.42	.....	35.42	12.93	13.42
	1906	232	1,008.62	780.17	228.45	20.16	20.16	.....	8.06	8.06	.....	28.22	28.22	.....	49.93	18.22	18.07
Army transports	1907	1,497	742.82	707.41	35.40	.....	.....	.....	4.68	3.34	1.34	4.68	3.34	1.34	32.29	11.78	15.86
	1906	1,282	758.19	709.05	49.14	1.56	1.56	.....	7.02	4.68	2.34	8.58	6.24	2.34	42.65	15.57	20.53
Total	**1907**	**53,803**	**1,218.26**	**1,005.06**	**213.20**	**20.15**	**17.82**	**2.33**	**5.81**	**3.44**	**2.37**	**25.96**	**21.26**	**4.70**	**46.17**	**16.85**	**13.83**
	1906	56,443	1,276.88	1,053.08	223.80	26.00	23.46	2.54	6.11	3.28	2.83	32.11	26.74	5.37	49.79	18.17	14.23
Regular Army, American troops, 1898 to 1905		64,474	1,773.86	1,560.55	213.31	23.43	20.30	3.13	13.91	9.89	4.02	37.34	30.19	7.15	.....	.....	.....

Chart showing the relative admission, death, discharge, and noneffective rates per thousand of mean strength for disease, by countries.

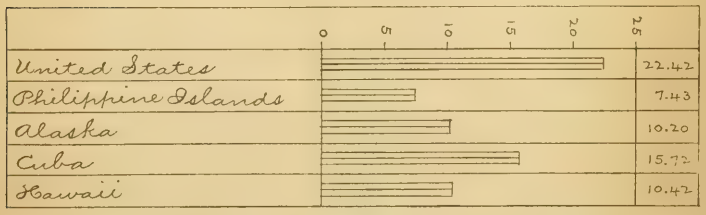
Admissions.



Deaths.



Discharges.



Noneffective.

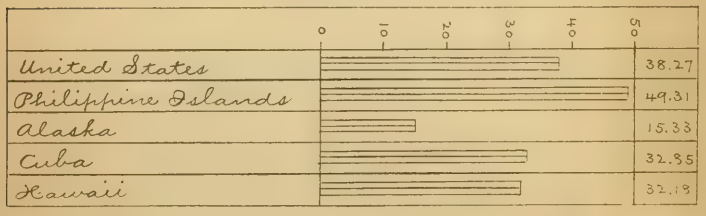
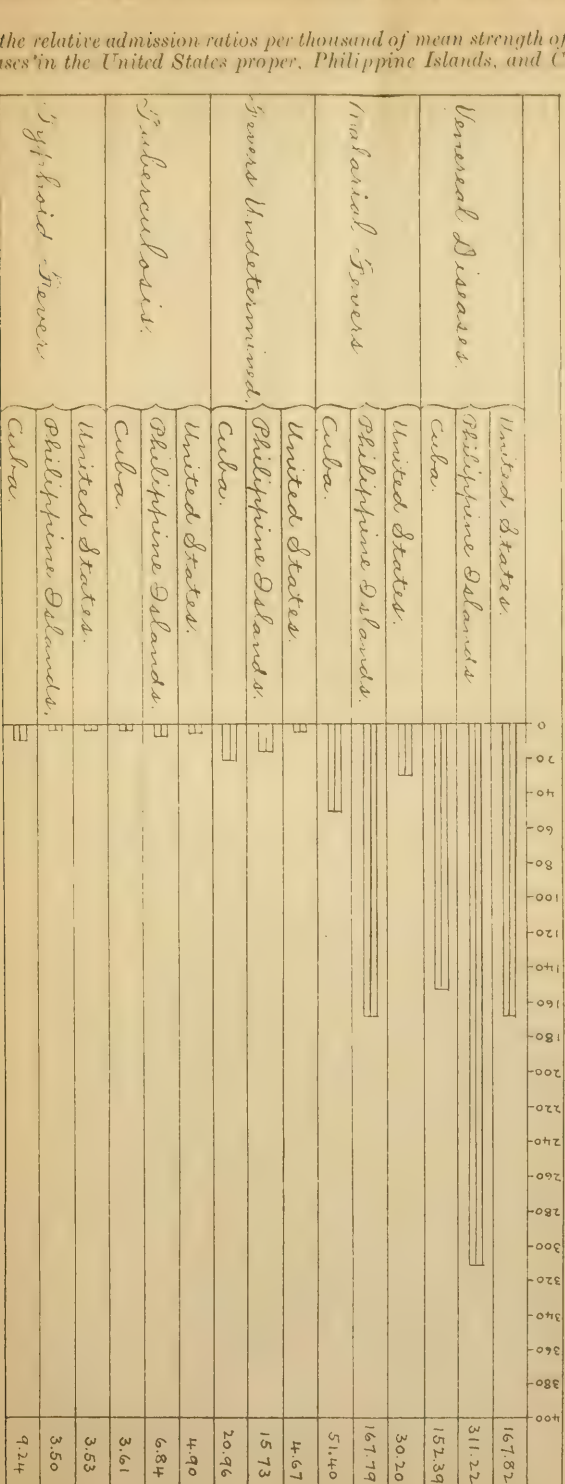


Chart showing the relative admission ratios per thousand of mean strength of certain special diseases in the United States proper, Philippine Islands, and Cuba.



All the deaths and discharges which occurred in the United States of troops invalided home from foreign service and whose organizations remained abroad have been assigned to the country from which the soldiers were invalided. There yet remains, however, a large number of deaths and discharges which can only be assigned to the place where they occur, though the diseases which led to these terminations were contracted in foreign service.

Disease only being considered, Alaska had, as usual, the lowest admission and constantly noneffective rates.

Hawaii had no deaths, and admission and constantly noneffective rates second only to those of Alaska.

Cuba was third with admission, death and noneffective rates all better than those of the United States.

The Philippine Islands had, as usual, higher rates than any other country where United States troops are serving.

OFFICERS.[a]

The mean strength of officers was 3,477 as obtained from the return of the Medical Department and 3,710 from The Adjutant-General.

There were 2,090 admissions, 11 deaths, and 102.08 constantly noneffective from all causes, equal to ratios of 601.09, 2.96, and 23.36; these rates are considerably lower than for last year, and lower than for any year since statistics have been compiled separately for officers.

The principal causes of admission in the order of their importance were influenza 64.71, diarrhea and enteritis 37.69, malarial fevers 33.36, and bronchitis 31.93.

Chronic nephritis caused 2 deaths; no other disease caused more than 1 death. There were 3 deaths from accident.

INFLUENCE OF ARM OF SERVICE.

(See tables, pp. 172, 176.)

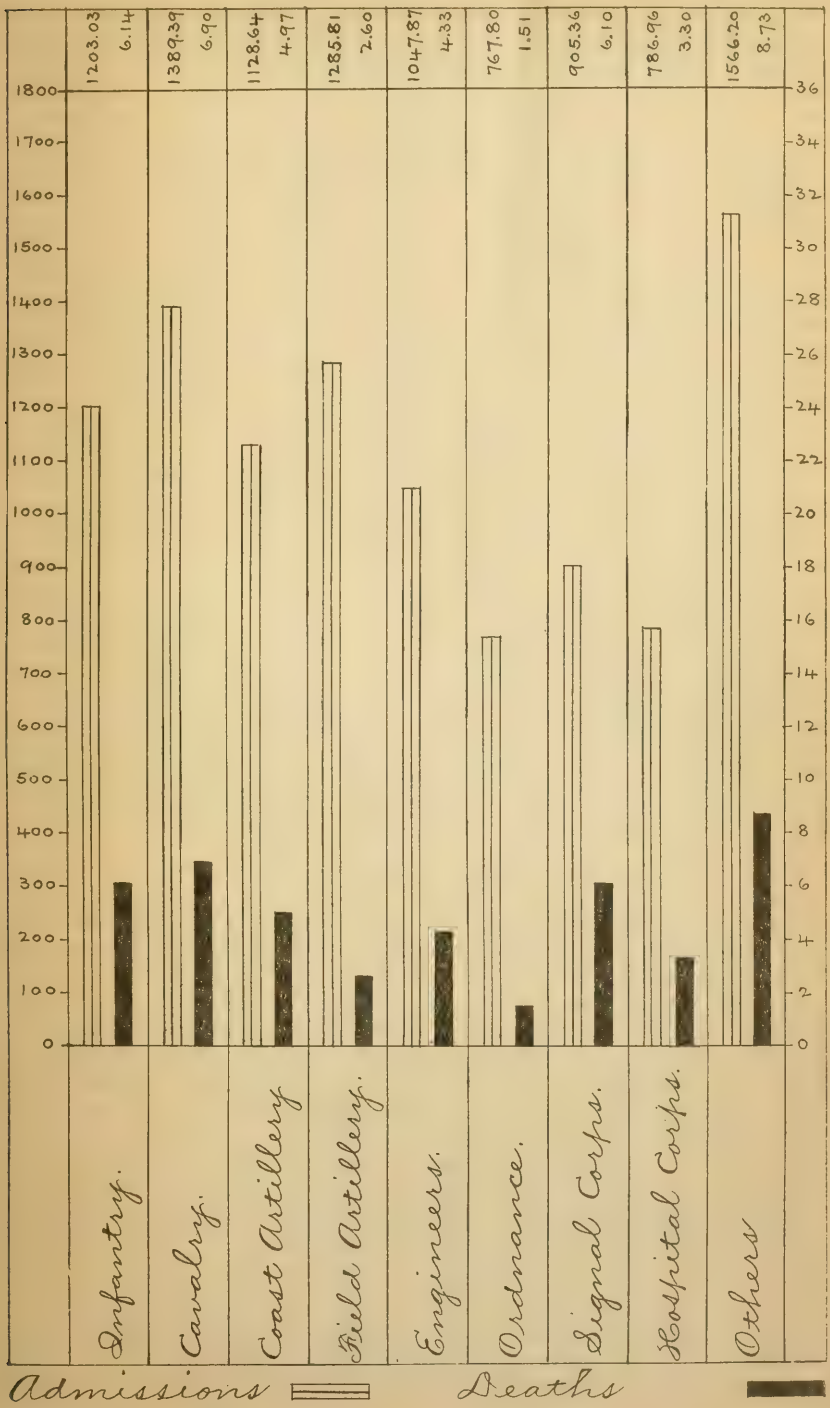
In these comparisons the enlisted men of the ordnance department are not considered on account of their small number and the special character of their services.

The admission rate was highest in the cavalry and lowest in the hospital corps; the death rate was highest in the cavalry and lowest in the field artillery.

Considering the special diseases the infantry had the highest admission rates for pneumonia and for syphilis; the cavalry had the highest admission rate for gonorrhea; the coast artillery had the highest admission rates for alcoholism and for acute bronchitis, and the lowest admission rate for dysentery and for typhoid fever; the field artillery had the highest admission rate for malaria and for chancroid, and the lowest for alcoholism, hernia, and tuberculosis; the engineers had the highest admission rates for hernia and for typhoid fever; the signal corps had the lowest admission rate for malaria; the hospital corps had the highest admission rates for

[a] American officers of the Porto Rican Regiment and Philippine Scouts are included in the statement.

Chart showing the relative admission and death ratios per thousand of mean strength, by arms of service.



dysentery and for tuberculosis and the lowest for acute bronchitis, pneumonia, gonorrhea, syphilis, and chancroid.

The general admission and death rates by arms of service vary considerably from year to year, but the liability to special diseases, as shown above, undergoes but little change.

INFLUENCE OF RACE.

All the rates except that for discharges for disability were higher for colored than for white troops, the death rate being almost twice as great.

COMPARISON WITH FOREIGN ARMIES.

In the following charts and the tables on pages 166–169 a comparison has been made of all the data available in the annexes of the annual reports of the medical departments of the armies of the respective countries. The latest reports received have been used in each case, and every effort made to secure accuracy; but there are so many factors concerned which are peculiar to each country that too much importance must not be attached to the results.

It will be noted that the death and noneffective rates are higher in the United States Army than in any other, and the admission rate higher than in any other except the Dutch army, while the discharge for disability and total loss rates are much lower than for any other army except the British and Belgian.

As regards special diseases, the admission rates for alcoholism and venereal diseases are much higher in the American Army than in any other, except that for syphilis the British Army has a rate almost double that of ours. The rate for malaria is higher than for any other army except the British and Spanish; the rate for tuberculosis is lower than that of a number of armies, but more than twice as great as the rates of Great Britain and Prussia. Typhoid fever gives a lower admission rate than in the British and French armies, but a considerably higher rate than that of Prussia.

SURGICAL OPERATIONS.

On page 129 will be found a table of the principal surgical operations performed by medical officers upon the officers and enlisted men of the Army.

In 3,009 operations there were only 41 failures and 21 deaths. Of the 21 deaths none appear to have been the result of the operation nor of the use of an anæsthetic. Three deaths followed 30 operations for abscess of the liver, 2 followed 142 operations for appendicitis, 2 were the result of tetanus following operations for severe injuries.

There were 150 operations for hernia, all successful and with no mortality.

Twenty-five operations were done under spinal anæsthesia, including 10 for hemorrhoids and 3 for hernia.

RECRUITING.

The wisdom and efficiency of the plan by which all enlistments and reenlistments were discontinued at the general recruiting stations (except the reenlistment of members of recruiting parties)

Chart showing a comparison with foreign armies of the relative total loss, death, and discharge ratios per thousand of mean strength.

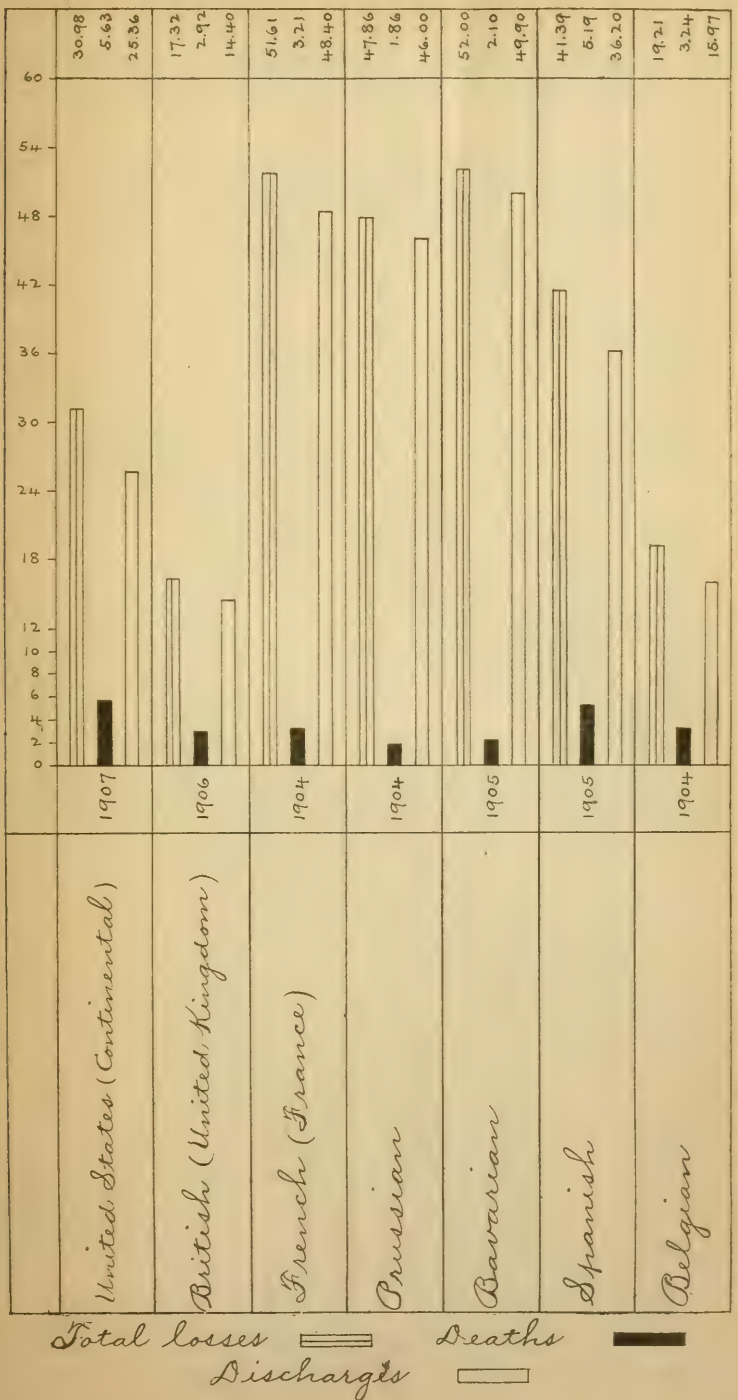
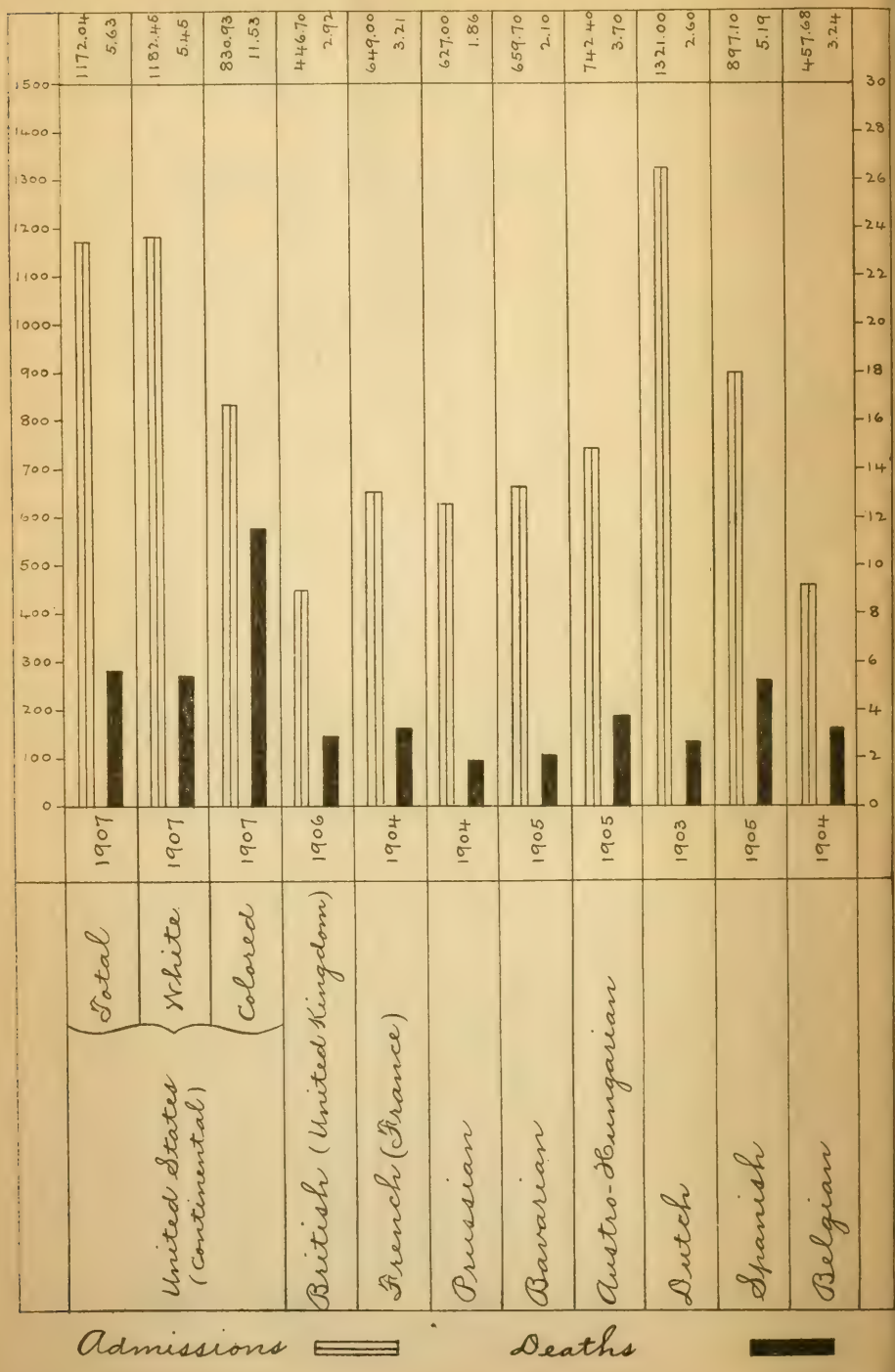


Chart showing a comparison with foreign armies of the relative admission and death ratios per thousand of mean strength.



and which requires that enlistment shall only be made at depots and depot posts after examination by a medical officer of the Army have been further demonstrated during the past year. As was to be expected the greatest influence of the regulation has been to materially lessen the discharge for disability rate and to eliminate the many complaints as to the unsatisfactory character from a physical standpoint of the assigned recruits under the old system of recruiting.

The first table shows the number of applicants for enlistment, white and colored, examined physically during the year 1907 by medical officers, with the number accepted and rejected and the number who declined enlistment, with ratios per thousand:

TABLE A.

	White.		Colored.		Total.	
	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.
Examined by medical officers	32,199	1,000.00	1,665	1,000.00	33,864	1,000.00
Accepted by medical officers	28,531	886.08	1,483	890.69	30,014	886.31
By first enlistment	16,925	525.64	531	318.92	17,456	515.47
By all other enlistments	11,606	360.44	952	571.77	12,558	370.84
Rejected by medical officers [a]	2,948	91.56	162	97.30	3,110	91.84
Declined	720	22.36	20	12.01	740	21.85

[a] One hundred and twenty-seven rejections by medical officers for causes not physical are not included in table.

The large increase in the percentage of accepted recruits, 88.63 per cent as against 70.6 per cent in 1906 and 66.5 per cent in 1905, is due to the fact that nearly all the applicants who came before medical officers were picked men who had already passed the scrutiny of the recruiting officers. The number of rejections by recruiting officers is not known to this office.

Table B shows the nativity of the accepted applicants for enlistment for the year. The proportion of foreign-born white recruits was slightly in excess of that for last year, 141.07 compared with 139.71 per 1,000, respectively. The relative number from the different foreign countries was about as usual:

TABLE B.

Country.	White.		Colored.		Total.	
	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.
United States	24,506	858.93	1,483	1,000.00	25,989	865.90
Germany	875	30.67			875	29.15
Ireland	694	24.32			694	23.12
England	476	16.68			476	15.86
Russia	413	14.48			413	13.76
Austria	349	12.23			349	11.63
Scandinavia	298	10.45			298	9.93
Canada	284	9.95			284	9.46
Hungary	124	4.35			124	4.13
Denmark	105	3.68			105	3.50
Italy	102	3.58			102	3.40
Scotland	78	2.73			78	2.60
Switzerland	66	2.31			66	2.20
Holland	34	1.19			34	1.13
France	22	.77			22	.73
Spain	11	.39			11	.37
Cuba	2	.07			2	.07
Others	92	3.22			92	3.06
Total foreign	4,025	141.07			4,025	134.10
Grand total	28,531	1,000.00	1,483	1,000.00	30,014	1,000.00

The following tables have been carefully compared and are of interest as they show the state of physical development of the material of which the Army is composed.

The ages of all the recruits accepted, white and colored, and the proportion at each age per 1,000, are shown in this statement:

TABLE C.

Age.	White.		Colored.		Total.	
	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.
18 years and under	803	28.14	16	10.79	819	27.29
19 years	790	27.69	14	9.44	804	26.79
20 years	572	20.05	14	9.44	586	19.52
21 years	5,474	191.86	147	99.12	5,621	187.28
22 years	3,661	128.32	125	84.29	3,786	126.14
23 years	2,288	80.19	112	75.52	2,400	79.96
24 years	2,421	84.86	128	86.31	2,549	84.93
25 years	1,886	66.10	91	61.36	1,977	65.87
26 years	1,402	49.14	76	51.25	1,478	49.25
27 years	1,487	52.12	91	61.36	1,578	52.58
28 years	1,111	38.94	83	55.97	1,194	39.78
29 years	944	33.09	73	49.22	1,017	33.88
30 years	800	28.04	73	49.22	873	29.09
31 years	783	27.44	63	42.48	846	28.18
32 years	585	20.50	36	24.28	621	20.69
33 years	499	17.49	37	24.95	536	17.86
34 years	423	14.83	36	24.28	459	15.29
35 years	326	11.43	29	19.56	355	11.83
36 years	296	10.37	27	18.21	323	10.76
37 years	298	10.44	26	17.53	324	10.79
38 years	255	8.94	22	14.83	277	9.23
39 years	194	6.80	23	15.51	217	7.23
40 years and over	1,233	43.22	141	95.08	1,374	45.78
Total	28,531	1,000.00	1,483	1,000.00	30,014	1,000.00

The series of tables which follow show separately for each race the heights of accepted recruits for the year and the proportion of each height per 1,000; also, in absolute and proportional numbers, the relation of height to age:

TABLE D.—*Relation of height to age.*

ABSOLUTE NUMBERS—WHITE TROOPS.

Height.	Age.								
	18 years and under.	19 years.	20 years.	21 years.	22 years.	23 years.	24 years.	25 years.	26 years and over.	Total.
5 feet 1 inch and under		1	1	3			1	2	7	15
5 feet 2 inches	2	1		4	6	3	1	1	20	38
5 feet 3 inches	18	18	14	51	43	15	33	24	105	321
5 feet 4 inches	98	82	39	418	242	157	149	121	695	2,001
5 feet 5 inches	121	116	80	650	406	265	249	191	1,202	3,280
5 feet 6 inches	158	138	103	899	625	370	383	327	1,610	4,613
5 feet 7 inches	157	156	102	973	615	386	415	314	1,812	4,930
5 feet 8 inches	122	98	91	977	647	370	429	302	1,764	4,800
5 feet 9 inches	72	83	74	678	461	273	303	231	1,420	3,595
5 feet 10 inches	31	48	34	422	289	216	217	169	952	2,378
5 feet 11 inches	16	29	18	234	169	110	140	94	491	1,301
6 feet	4	13	11	100	97	91	66	69	364	815
6 feet 1 inch	3	7	2	45	37	26	21	24	126	291
6 feet 2 inches and over	1		3	20	24	6	14	17	68	153
Total	803	790	572	5,474	3,661	2,288	2,421	1,886	10,636	28,531

TABLE D.—*Relation of height to age*—Continued.

PROPORTIONAL NUMBERS—WHITE TROOPS.

Height.	Age. 18 years and under.	19 years.	20 years.	21 years.	22 years.	23 years.	24 years.	25 years.	26 years and over.	Total.
5 feet 1 inch and under		1.27	1.75	0.55			0.41	1.06	0.66	0.53
5 feet 2 inches	2.49	1.27		.73	1.64	1.31	.41	.53	1.88	1.33
5 feet 3 inches	22.42	22.78	24.48	9.32	11.75	6.56	13.63	12.73	9.87	11.25
5 feet 4 inches	122.04	103.80	68.18	76.36	66.10	68.62	61.54	64.16	65.34	70.13
5 feet 5 inches	150.68	146.84	139.86	118.74	110.90	115.82	102.85	101.27	113.01	114.96
5 feet 6 inches	196.76	174.68	180.07	164.23	170.72	161.71	158.20	173.38	151.39	161.68
5 feet 7 inches	195.52	197.47	178.32	177.75	167.99	168.71	171.42	166.49	170.36	172.79
5 feet 8 inches	151.93	124.05	159.09	178.48	176.73	161.71	177.20	160.13	165.85	168.24
5 feet 9 inches	89.66	105.06	129.37	123.86	125.92	119.32	125.15	122.48	133.51	126.00
5 feet 10 inches	38.61	60.76	59.44	77.09	78.94	94.41	89.63	89.61	89.51	83.35
5 feet 11 inches	19.93	36.71	31.47	42.75	46.16	48.08	57.83	49.84	46.16	45.60
6 feet	4.98	16.46	19.23	18.27	26.50	39.77	27.26	36.59	34.22	28.57
6 feet 1 inch	3.74	8.86	3.50	8.22	10.11	11.36	8.67	12.73	11.85	10.20
6 feet 2 inches	1.25		5.24	3.65	6.56	2.62	5.78	9.01	6.39	5.36
Total	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00

TABLE E.—*Relation of height to age.*

ABSOLUTE NUMBERS—COLORED TROOPS.

Height.	Age. 18 years and under.	19 years.	20 years.	21 years.	22 years.	23 years.	24 years.	25 years.	26 years and over.	Total.
5 feet 1 inch and under					1					1
5 feet 2 inches	1								2	3
5 feet 3 inches	1	1		2	1	1	1	1	3	11
5 feet 4 inches	3	1	1	15	5	4	6	5	50	90
5 feet 5 inches	2	1	3	15	18	19	16	9	77	160
5 feet 6 inches	3	4		30	22	12	20	12	136	239
5 feet 7 inches	2	3	3	31	28	15	24	18	150	274
5 feet 8 inches	1	2	2	22	22	25	18	17	158	267
5 feet 9 inches	1	2		14	12	12	19	10	95	165
5 feet 10 inches	2		3	12	6	9	9	8	78	127
5 feet 11 inches			1	4	4	8	8	5	40	70
6 feet			1		6	6	5	3	29	50
6 feet 1 inch				1			1	3	14	19
6 feet 2 inches				1		1	1		4	7
Total	16	14	14	147	125	112	128	91	836	1,483

PROPORTIONAL NUMBERS—COLORED TROOPS.

5 feet 1 inch and under					8.00					0.67
5 feet 2 inches	62.50								2.39	2.02
5 feet 3 inches	62.50	71.43		13.61	8.00	8.93	7.81	10.99	3.59	7.42
5 feet 4 inches	187.50	71.43	71.43	102.04	40.00	35.71	46.87	54.95	59.81	60.69
5 feet 5 inches	125.00	71.43	214.29	102.04	144.00	169.64	125.00	98.90	92.11	107.89
5 feet 6 inches	187.50	285.71		204.08	176.00	107.14	156.25	131.87	162.68	161.16
5 feet 7 inches	125.00	214.29	214.29	210.88	224.00	133.93	187.50	197.80	179.42	184.76
5 feet 8 inches	62.50	142.86	142.86	149.66	176.00	223.21	140.62	186.81	189.00	180.04
5 feet 9 inches	62.50	142.86		95.24	96.00	107.14	148.44	109.89	113.64	111.26
5 feet 10 inches	125.00		214.29	81.63	48.00	80.36	70.31	87.91	93.30	85.64
5 feet 11 inches			71.43	27.21	32.00	71.43	62.50	54.95	47.85	47.20
6 feet			71.43		48.00	53.57	39.06	32.97	34.69	33.72
6 feet 1 inch				6.80			7.81	32.97	16.75	12.81
6 feet 2 inches				6.80		8.93	7.81		4.78	4.72
Total	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00

Forty-six and seventy-three hundredths per cent of the white recruits were 5 feet 8 inches or over and only 8.32 per cent under 5 feet 4 inches, compared with 43.26 and 1.42 per cent for the previous year, and 47.54 and 7.08 per cent, the corresponding figures for colored troops for 1907.

The following tables show separately for each race the weights of accepted recruits and the proportion of each weight per 1,000; also the relation of weight to age in both absolute and proportional numbers:

TABLE F.—*Relation of weight to age.*

ABSOLUTE NUMBERS—WHITE TROOPS.

Weight.	Age.									
	18 years and under.	19 years.	20 years.	21 years.	22 years.	23 years.	24 years.	25 years.	26 years and over.	Total.
119 pounds and under	81	57	32	151	78	36	45	42	223	745
120 to 124 pounds	138	90	61	431	224	117	114	81	397	1,653
125 to 129 pounds	165	139	90	707	370	196	181	160	727	2,735
130 to 134 pounds	120	136	88	872	545	258	285	218	1,039	3,561
135 to 139 pounds	106	122	87	846	535	336	347	258	1,297	3,934
140 to 144 pounds	76	90	67	773	571	346	350	256	1,325	3,854
145 to 149 pounds	47	67	51	597	432	314	305	254	1,275	3,342
150 to 154 pounds	32	38	38	464	316	228	264	191	1,079	2,650
155 to 159 pounds	21	25	26	256	225	167	178	140	793	1,831
160 to 164 pounds	5	13	11	161	147	110	145	98	686	1,376
165 to 169 pounds	7	4	8	95	96	85	83	70	520	968
170 to 174 pounds	3	6	4	49	50	44	47	44	395	642
175 to 179 pounds	.....	2	3	38	36	23	37	36	253	428
180 pounds and over	2	1	6	34	36	28	40	38	627	812
Total	803	790	572	5,474	3,661	2,288	2,421	1,886	10,636	28,531

PROPORTIONAL NUMBERS—WHITE TROOPS.

119 pounds and under	100.87	72.15	55.94	27.58	21.31	15.73	18.59	22.27	20.97	26.11
120 to 124 pounds	171.86	113.92	106.64	78.74	61.19	51.14	47.09	42.95	37.33	57.94
125 to 129 pounds	205.48	175.95	157.34	129.16	101.07	85.66	74.76	84.84	68.35	95.86
130 to 134 pounds	149.44	172.15	153.85	159.30	148.87	112.76	117.72	115.59	97.69	124.81
135 to 139 pounds	132.00	154.43	152.10	154.55	146.13	146.85	143.33	136.80	121.94	137.89
140 to 144 pounds	94.65	113.92	117.13	141.21	155.97	151.22	144.57	135.74	124.58	135.08
145 to 149 pounds	58.53	84.81	89.16	109.06	118.00	137.24	125.98	134.68	119.88	117.14
150 to 154 pounds	39.85	48.10	66.43	84.76	86.32	99.65	109.05	101.27	101.45	92.88
155 to 159 pounds	26.15	31.65	45.45	46.77	61.46	72.99	73.52	74.23	74.56	64.18
160 to 164 pounds	6.23	16.46	19.23	29.41	40.15	48.08	59.89	51.96	64.50	48.23
165 to 169 pounds	8.72	5.06	13.99	17.35	26.22	37.15	34.28	37.12	48.89	33.93
170 to 174 pounds	3.74	7.59	6.99	8.95	13.66	19.23	19.41	23.33	37.14	22.50
175 to 179 pounds	.....	2.53	5.24	6.94	9.83	10.05	15.28	19.09	23.79	15.00
180 pounds and over	2.49	1.27	10.49	6.21	9.83	12.24	16.52	20.15	58.95	28.46
Total	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00

TABLE G.—*Relation of weight to age.*

ABSOLUTE NUMBERS—COLORED TROOPS.

Weight.	Age.									
	18 years and under.	19 years.	20 years.	21 years.	22 years.	23 years.	24 years.	25 years.	26 years and over.	Total.
119 pounds and under	1	1					1		[illegible]	[illegible]
120 to 124 pounds	3	1	2	6		1	4	1	13	31
125 to 129 pounds	2	2	2	19	14	11	3	6	35	94
130 to 134 pounds	1	1	1	22	14	6	11	10	65	131
135 to 139 pounds	2	2	2	19	14	11	16	7	85	158
140 to 144 pounds	5	3	2	24	22	17	25	13	93	201
145 to 149 pounds		1	2	25	18	12	15	14	110	197
150 to 154 pounds	1	1		11	15	12	16	12	96	164
155 to 159 pounds	1	1		12	7	10	18	8	86	143
160 to 164 pounds		1	2	3	8	11	10	6	78	119
165 to 169 pounds			1	5	9	8	3	3	44	73
170 to 174 pounds				1	1	5	1	4	41	53
175 to 179 pounds				2	1	2	3	2	25	35
180 pounds and over				1	2	6	2	5	64	80
Total	16	14	14	147	125	112	128	91	836	1,483

PROPORTIONAL NUMBERS—COLORED TROOPS.

119 pounds and under	62.50	71.43					7.81		[illegible]	2.70
120 to 124 pounds	187.50	71.43	142.86	40.82		8.93	31.25	10.99	15.55	20.90
125 to 129 pounds	125.00	142.86	142.86	129.25	112.00	98.21	23.44	65.93	41.87	63.39
130 to 134 pounds	62.50	71.43	71.43	149.66	112.00	53.57	85.94	109.89	77.75	88.33
135 to 139 pounds	125.00	142.86	142.86	129.25	112.00	98.21	125.00	76.92	101.67	106.54
140 to 144 pounds	312.50	214.29	142.86	142.86	176.00	151.79	195.31	142.86	111.24	135.54
145 to 149 pounds		71.43	142.86	170.07	144.00	107.14	117.19	153.85	131.58	132.84
150 to 154 pounds	62.50	71.43		74.83	120.00	107.14	125.00	131.87	114.83	110.59
155 to 159 pounds	62.50	71.43		81.63	56.00	89.29	140.62	87.91	102.87	96.43
160 to 164 pounds		71.43	142.86	20.41	64.00	98.21	78.12	65.93	93.30	80.24
165 to 169 pounds			71.43	34.01	72.00	71.43	23.44	32.97	52.63	49.22
170 to 174 pounds				6.80	8.00	44.64	7.81	43.96	49.04	35.74
175 to 179 pounds				13.61	8.00	17.86	23.44	21.98	29.90	23.60
180 pounds and over				6.80	16.00	53.57	15.62	54.95	76.55	53.94
Total	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00

Fifty-five and seventy-four hundredths per cent of the white troops weighed 140 pounds or over, while 2.61 per cent weighed less than 120 pounds, compared with 56.54 and 1.77 per cent for the previous year and 71.84 and 2.70, the corresponding figures for colored troops for 1907, showing that colored recruits were heavier than white accepted applicants of the same age.

The next tables show separately for each race the chest measurement of accepted recruits and the proportion of each measurement per 1,000; also the chest measurement in relation to age in both absolute and proportional numbers:

TABLE H.—*Relation of chest measurement to age.*

ABSOLUTE NUMBERS—WHITE TROOPS.

Chest measurement.	Age. 18 years and under.	19 years.	20 years.	21 years.	22 years.	23 years.	24 years.	25 years.	26 years and over.	Total.
30 inches and under.	129	104	47	353	165	72	81	59	198	1,208
31 inches	196	147	93	801	439	257	230	155	667	2,985
32 inches	251	271	189	1,582	959	515	482	385	1,666	6,300
33 inches	128	140	123	1,275	884	565	565	467	2,122	6,269
34 inches	78	85	74	816	654	454	493	370	2,057	5,081
35 inches	15	32	28	406	369	239	324	240	1,601	3,254
36 inches	5	9	14	171	126	128	154	126	1,033	1,766
37 inches	1	1	3	48	45	35	66	59	633	891
38 inches	.....	1	1	13	16	17	19	13	345	425
39 inches and over	.....	.....	.....	9	4	6	7	12	314	352
Total	803	790	572	5,474	3,661	2,288	2,421	1,886	10,636	28,531

PROPORTIONAL NUMBERS—WHITE TROOPS.

30 inches and under.	160.65	131.65	82.17	64.49	45.07	31.47	33.46	31.28	18.62	42.34
31 inches	244.08	186.08	162.59	146.33	119.91	112.33	95.00	82.18	62.71	104.62
32 inches	312.57	343.04	330.42	289.00	261.95	225.09	199.09	204.14	156.64	220.81
33 inches	159.40	177.21	215.03	232.92	241.46	246.94	233.37	247.61	199.51	219.73
34 inches	97.14	107.59	129.37	149.07	178.64	198.43	203.63	196.18	193.40	178.09
35 inches	18.68	40.51	48.95	74.17	100.79	104.46	133.83	127.25	150.53	114.05
36 inches	6.23	11.39	24.48	31.24	34.42	55.94	63.61	66.81	97.12	61.90
37 inches	1.25	1.27	5.24	8.75	12.29	15.30	27.26	31.28	59.51	31.23
38 inches	.....	1.27	1.75	2.37	4.37	7.43	7.85	6.89	32.44	14.90
39 inches and over	.....	.....	.....	1.64	1.09	2.62	2.89	6.36	29.52	12.34
Total	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00

TABLE I.—*Relation of chest measurement to age.*

ABSOLUTE NUMBERS—COLORED TROOPS.

Chest measurement.	Age. 18 years and under.	19 years.	20 years.	21 years.	22 years.	23 years.	24 years.	25 years.	26 years and over.	Total.
30 inches and under.	1	3	1	8	7	.....	6	1	8	35
31 inches	5	3	3	21	18	12	8	7	30	107
32 inches	6	2	5	45	35	22	19	17	117	268
33 inches	2	5	2	33	26	22	26	23	140	279
34 inches	.....	1	2	21	21	29	35	20	180	309
35 inches	1	.....	1	6	14	16	20	12	156	226
36 inches	1	.....	.....	12	4	9	10	7	87	130
37 inches	.....	.....	.....	1	.....	1	3	4	54	63
38 inches	.....	.....	.....	.....	.....	1	.....	.....	32	33
39 inches and over	.....	.....	.....	.....	.....	.....	1	.....	32	33
Total	16	14	14	147	125	112	128	91	836	1,483

PROPORTIONAL NUMBERS—COLORED TROOPS.

30 inches and under.	62.50	214.29	71.43	54.42	56.00	.....	46.87	10.99	9.57	23.60
31 inches	312.50	214.29	214.29	142.86	144.00	107.14	62.50	76.92	35.89	72.1
32 inches	375.00	142.86	357.14	306.12	280.00	196.43	148.44	186.81	139.95	180.71
33 inches	125.00	357.14	142.86	224.49	208.00	196.43	203.12	252.75	167.46	188.13
34 inches	.....	71.43	142.86	142.86	168.00	258.93	273.44	219.78	215.31	208.36
35 inches	62.50	.....	71.43	40.82	112.00	142.86	156.25	131.87	186.60	152.39
36 inches	62.50	.....	.....	81.63	32.00	80.36	78.12	76.92	104.07	87.66
37 inches	.....	.....	.....	6.80	.....	8.93	23.44	43.96	64.59	42.48
38 inches	.....	.....	.....	.....	.....	8.93	.....	.....	38.28	22.25
39 inches and over	.....	.....	.....	.....	.....	.....	7.81	.....	38.28	22.25
Total	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00

The chest measurement of 41.25 per cent of white recruits was 34 inches and upward, and 4.23 per cent were 30 inches and under, compared with 42.15 and 2.92 per cent, respectively, for the previous year, and 53.54 and 2.36 per cent, the corresponding figures for colored recruits for the year 1907, the colored candidates again showing to advantage.

The following table shows the causes of rejections among white and colored candidates examined for enlistment during the year 1907, with ratios per 1,000 rejected

TABLE J.—*Causes of rejection of white and colored candidates examined for enlistment by medical officers of the Army, 1907.*

Causes of rejection.	Total.		White.		Colored.	
	Total.	Ratio per 1,000 examined.	Total.	Ratio per 1,000 examined.	Total.	Ratio per 1,000 examined.
1. Defects of vision	301	96.78	291	98.71	10	61.73
2. Venereal diseases	259	83.28	230	78.02	29	179.01
3. Heart disease	255	82.00	240	81.41	15	92.60
4. Alcoholism	235	75.56	227	77.00	8	49.38
5. Defects of hearing	204	65.60	203	68.86	1	6.17
6. Diseases of the eye except defects of vision	154	49.51	151	51.22	3	18.52
7. Hernia	152	48.87	142	48.17	10	61.73
8. Flat feet	144	46.30	132	44.78	12	74.07
9. Underweight	143	45.98	140	47.49	3	18.52
10. Defective teeth	133	42.76	120	40.71	13	80.25
11. Defects of the ear except defects of hearing	124	39.87	123	41.72	1	6.17
12. Curvature of spine	111	35.69	100	33.92	11	67.90
13. Chest development insufficient	107	34.40	106	35.96	1	6.17
14. Varicose veins	93	29.90	87	29.51	6	37.04
15. Defects of development except as shown in detail	88	28.30	85	28.83	3	18.52
16. Hemorrhoids	64	20.58	60	20.35	4	24.69
17. Injuries	64	20.58	63	21.37	1	6.17
18. Tuberculosis	62	19.94	56	19.00	6	37.04
19. Diseases of the skin	62	19.94	53	17.98	9	55.56
20. Varicocele	56	18.01	54	18.32	2	12.35
21. Diseases of the respiratory system	55	17.68	54	18.32	1	6.17
22. Underheight	44	14.15	42	14.25	2	12.35
23. Diseases of the organs of locomotion except spinal curvature	39	12.54	37	12.55	2	12.35
24. Physical debility	34	10.93	33	11.19	1	6.17
25. Weakness of mind	24	7.72	22	7.46	2	12.35
26. General diseases except as shown in detail	23	7.40	21	7.12	2	12.35
27. Diseases of the nervous system except as shown in detail	23	7.40	20	6.78	3	18.52
28. Diseases of the genito-urinary system (non-venereal)	22	7.07	21	7.12	1	6.17
29. Diseases of the circulatory system except as shown in detail	15	4.82	15	5.09	.....	.....
30. Diseases of the digestive system except as shown in detail	13	4.18	13	4.41	.....	.....
31. Overweight and obesity	7	2.25	7	2.37	.....	.....
Total	3,110	1,000.00	2,948	1,000.00	162	1,000.00

Defects of vision, as during the previous year, caused the largest proportion of rejections in 1907, yet the rate showed a material decrease compared with that of the preceding year. Venereal diseases advanced from fourth to second place as a cause for rejection and incidentally had a higher rate than for 1906. Heart diseases also advanced considerably, compared with the previous year, the figures being 82.00 and 36.62, respectively. Alcoholism, with a rate of 75.56 per 1,000, made a most notable advance as a cause for rejection compared with the preceding year, when only 9.65 per 1,000 were rejected for that cause. There is no apparent reason for this increase. The

proportion of rejections for varicocele has dropped from the apparently high rate of 70.11 per 1,000 in 1905 to 18.01 for the present year, the reduced rate being due to the change in the standard as regards this condition. The rate for defective teeth was also considerably lowered during the last year, caused by a change in the requirements in this regard.

SANITATION.

It is becoming more apparent each year that sanitation, the science of preventive medicine, is probably the most important of the many duties of the army medical officer. The Army, all parts of it, exists only for war purposes, and it is now known to everybody that preventable disease in time of war causes more deaths and more non-efficiency than do all the offensive weapons of the enemy. Disease, the greatest enemy of efficiency, must therefore be prevented by the Medical Department, and to do so its hands must be strengthened as much as possible. Even in time of peace great improvement can be made in this respect.

The following order, published during the past year, marks a decided advance in one direction—delegating to medical officers executive powers in sanitary matters:

General Orders,
No. 37.

FORT SHERIDAN, Ill.,
August 18, 1907.

[Extract.]

1. The surgeon is the chief sanitary officer of the post and reservation; all orders given by him in that capacity have the sanction of the commanding officer and must be promptly obeyed.

By order of Lieutenant Colonel Finley:

(Signed) THAD. B. SEIGLE,
1st. Lt., Batt. Adjt., 27th Inf., Adjutant.

Something of the same kind was done in most of the maneuver camps of 1906, when sanitary squads, working under the supervision of a medical officer, carried into execution his own recommendations after they had been approved by the commanding officer, and the plan worked excellently.

In addition to the granting of executive authority to the Medical Department in sanitary matters, all the special apparatus used in sanitary work and the care and transportation of the sick, such as ambulances, water carts, water sterilizers, disinfecting apparatus, field crematories, etc., should be purchased and supplied by the Medical Department. This would have the effect of putting into the hands of the sanitary expert the means necessary for carrying into effect his recommendations, so that they may be employed at such times and in such manner as his special knowledge and experience may dictate, and would definitely fix the responsibility for sanitary measures. The efficiency of these special appliances usually depends upon the details of their construction, details with which only a specialist can be expected to be familiar; and still more important is it that he should be able to control the time, place, and quantity of issue of such appliances.

In paragraph 1405, Army Regulations, "the Medical Department is charged with the duty of investigating the sanitary condition of the Army and making recommendations in reference thereto * * * ;"

and in paragraph 1406 it is stated that "the surgeon, under the direction of the commanding officer, will supervise the hygiene of the post or command, and recommend such measures as he may deem necessary to prevent or diminish disease. He will examine at least once a month, and note in the medical history of the post, the sanitary condition of all public buildings, the drainage, the sewerage, amount and quality of the water supply, the clothing and habits of the men, and the character and cooking of the food, and immediately after such examination will report thereon in writing to the commanding officer, with such recommendations as he may deem proper." As the regulations now stand, defective sanitary arrangements in construction work do not come to the notice of the sanitary department of the Army until the work is completed, and mistakes which might easily have been prevented at the proper time may have to be corrected at great expense and loss of time, or they are not corrected at all, and avoidable sickness results. It is therefore recommended that the regulations be so amended as to provide that, except in emergency, no buildings for occupation by troops shall be constructed or altered until the opinion of the proper officer of the Medical Department has been obtained as to the sanitary questions involved in construction, arrangement, plumbing, heating, lighting, ventilation, etc., nor except in case of emergency shall any existing buildings not already occupied by troops be used for such purpose until an opinion has been obtained from the Medical Department as to their suitability from a sanitary point of view.

There have from time to time been complaints that railroad trains used for the transportation of troops have been in a filthy and insanitary condition. To prevent a recurrence of such conditions it is recommended that paragraph 1122, Army Regulations, be so amended as to prescribe that when special trains are provided for the transportation of troops for a journey of more than twenty-four hours' duration, and except in emergencies not permitting of delay, such train shall not be used for such purpose until the opinion of a medical officer has been obtained as to the suitability of the arrangements from a sanitary standpoint.

Protection of the command against insect-borne diseases has been carefully sought for a number of years past. The measures recommended have been directed chiefly against mosquitoes and flies, particularly the former.

The antimosquito campaign, while undoubtedly costing something, has been attended by results far outweighing the cost. Thus in the United States there has been a steady reduction in the rates for malarial fever, which this year are the lowest ever attained in the Army, the admission rate having been reduced from 665.82 per 1,000 in 1898 to 30.20 in 1907, which means in a mean strength of 35,137 for the year a saving of 22,338 admissions for malaria alone. When the same measures which have been so successful in the United States are carried out in the Philippine Islands the same results may be expected.

Last year particular attention was called to the importance of house flies as carriers of typhoid fever, intestinal diseases, tuberculosis, etc., and with a view of preventing the breeding of flies recommendation was made that all accumulations of stable manure be kept in fly-proof rooms; unfortunately this recommendation was disapproved by the

Acting Secretary of War. Since that time renewed attention has been called to the matter by the report of a study of the subject in New York City, under the auspices of a committee of the merchants association. This report showed plainly the coincidence of the occurrence of these diseases and the periods of excessive prevalence and activity of house flies.

The same thing is very clearly shown in the chart (p. 45) of the prevalence of typhoid fever in the Army in the United States by months. In view of these facts the suppression of flies becomes fully as important as that of mosquitoes. The measures to be taken are thorough screening of all dining rooms and kitchens and the prevention of fly breeding. House flies breed chiefly in horse manure, but to a less extent in human excreta and decaying organic matter generally. Cleanliness about kitchens and mess rooms, destruction of waste organic matter, and preventing access of flies to feces are important; but the essential point is preventing access of flies to their natural breeding place—horse manure.

UNITED STATES (CONTINENTAL), EXCLUSIVE OF ALASKA.

The average mean strength of the troops serving in the United States during the year was 35,132, of which 34,091 were white and 1,041 were colored.

Deaths and discharges which occurred among soldiers in the United States whose commands were on foreign service and who had been invalided home have been charged to the country from which the soldier was invalided.

The admission, discharge, constantly noneffective, and total loss rates, 1,172.04, 25.36, 45.22, and 30.99, respectively, were all lower than those of last year, while the death rate, 5.63, was a very little higher than for 1906, but lower than for any previous year.

The reduction in the discharge rate was particularly notable, 32.29 to 25.36, and is believed to be the result of the new system of recruiting, by which all recruits must be passed by an officer of the Medical Corps.

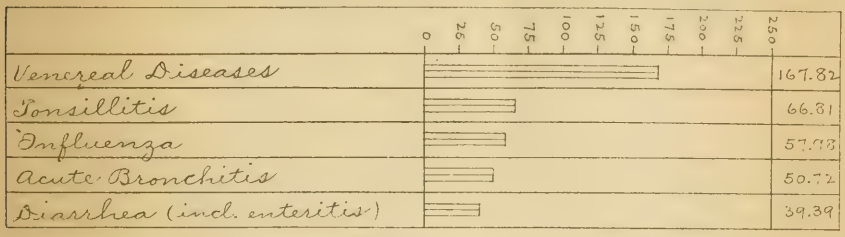
Venereal diseases, as usual, led all others as causes of admission and noneffectiveness, the rates being 167.82 and 11.22, as compared with 158.91 and 10.90 for 1906. Next in order of importance as causes of admission were influenza 57.98, bronchitis 54.19, diarrhea and enteritis 39.39, and alcoholism 36.09.

The most important cause of discharge for disability was tuberculosis, with venereal diseases second.

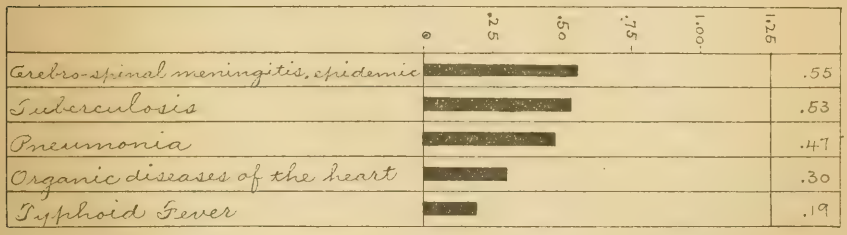
Cerebro-spinal fever and tuberculosis led as causes of death with ratios of 0.55 and 0.53, respectively; pneumonia was next with a rate of 0.47, followed by organic heart diseases, 0.30, and typhoid fever, 0.19.

Chart showing the relative admission, death, discharge, and noneffective ratios per thousand of mean strength for the five diseases causing the highest rates in the United States proper.

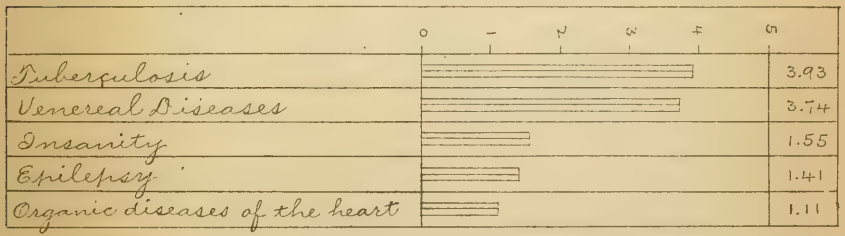
Admissions.



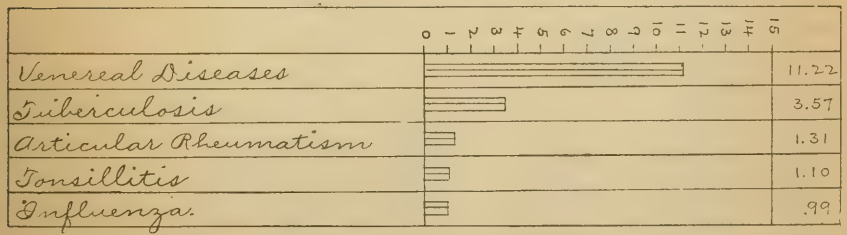
Deaths.



Discharges.



Noneffective.



An analysis of the causes of death as exhibited in the following table shows that over 42 per cent were due to external causes, and of these 20 per cent were suicidal:

Deaths among troops serving in the United States (continental), excluding Alaska, in 1907.

Causes.	Number.	Ratio per 1,000 of— Mean strength.	Total deaths.
DISEASES.			
Cerebro-spinal meningitis epidemic	20	0.55	170.94
Tuberculosis (pulmonary, 15; of the meninges, 2; of other organs, 2)	19	.53	162.39
Pneumonia	17	.47	145.30
Organic heart disease	11	.30	94.02
Typhoid fever	7	.19	59.83
Alcoholism (acute, 3; delerium tremens, 2)	5	.14	42.74
Purulent infection and septicemia	5	.14	42.74
Appendicitis	4	.11	34.19
Cerebral hemorrhage	3	.08	25.64
Aneurism, arch of aorta	3	.08	25.64
Hepatic abscess	3	.08	25.64
Nephritis (acute parenchymatous, 1; chronic parenchymatous, 2)	3	.08	25.64
Meningitis, cerebral	2	.06	17.09
Cancer	2	.06	17.09
Influenza	1	.03	8.55
Gonorrhea	1	.03	8.55
Cerebral thrombosis	1	.03	8.55
Purulent otitis media, acute	1	.03	8.55
Endocarditis, acute	1	.03	8.55
Angina pectoris	1	.03	8.55
Hemorrhages	1	.03	8.55
Chronic bronchitis	1	.03	8.55
Broncho-pneumonia	1	.03	8.55
Pulmonary abscess	1	.03	8.55
Congestion of the lungs	1	.03	8.55
Ulcer of the stomach, chronic	1	.03	8.55
Intestinal obstruction	1	.03	8.55
Total	117	3.24	1,000.00
EXTERNAL CAUSES.			
Suicides:			
By gunshot wound (rifle, 5; revolver, 5)	10		
By poisoning, acute (carbolic acid, 2; strychnine, 1; bichloride of mercury, 1)	4		
By jumping from high places (fracture of skull by jumping from window of company barracks while intoxicated)	1		
By incised wound (cutting throat with razor)	1		
By drowning	1		
By hanging	1		
Total suicides	18	.49	209.30
Homicides:			
By gunshot wound (shot by comrade, pistol, 1; by noncommissioned officer, shotgun, 1; by sentry while attempting to escape, rifle, 1; in brawl, character of weapon unknown, 1; by civilian, revolver, 1)	5		
By incised wounds, knife (stab wounds in heart, by civilian, 1; stab wounds in chest and abdomen, in brawl, 1; stab wounds in liver, in brawl, 1; stab wounds by hunting knife, in brawl, 1)	4		
By blunt instruments (struck with brick, fracture of skull, 1; struck on head by police officer, cerebral hemorrhage, 1; blow on head with fist during brawl, cerebral concussion, 1; shock from blow received in fight, 1; found dead, nature of wound or weapon unknown, concussion of brain, 1)	5		
Total homicides	14	.39	162.79
Accidental:			
By gunshot wound (premature explosion of charge while loading guns, 2; self-inflicted while cleaning revolvers, 2; self-inflicted, circumstances unknown, 1; accidental discharge of sentry's rifle, 1; revolver falling from pocket of comrade and exploding, 1; accidentally shot by comrade, 1)	8		
By drowning (circumstances not given, 5; while bathing, 4; capsizing of small boats, 3; fell into canals, 2; fell into river, 1; fell into creek, 1; fell off boat, 1; fell off wharf, 1)	18		
By poisoning, acute (wood alcohol, 5; opium, habitual users, 2; bichloride of mercury, accidentally administered, 1)	8		
By falling (from bridge, general crushing, 1; from high cliff, concussion of brain, 1; from horses—fracture of skull, 1, and compound fracture of leg, tetanus, 1; on iron-shod steps of barracks, fracture of skull, 1)	5		

Deaths among troops serving in the United States (continental), excluding Alaska, in 1907.—Continued.

Causes.	Number.	Ratio per 1,000 of:— Mean strength.	Ratio per 1,000 of:— Total deaths.
EXTERNAL CAUSES—continued.			
Accidental—Continued.			
By railroad cars (steam cars, 5; general crushing, 4; skull crushed, 1; by trolley cars, general crushing, 2; struck by cars, skull fractured, 1; fall from cars, skull fractured, 1; killed in railroad wreck, general crushing, 1)	10	.....	.....
By electricity (contact with wires of electric-lighting system, 1; struck by lightning, shock, 1)	2	.....	.....
Struck by limb of tree torn loose by high winds (fracture of spine)	1	.....	.....
Shipwreck (general freezing from exposure)	1	.....	.....
Found dead (asphyxiation by impaction of food in pharynx and larynx)	1	.....	.....
Total accidental	54	1.50	627.91
Total from external causes	86	2.38	1,000.00
Total for disease and injury	203	5.63	.....

PREVALENCE OF SPECIAL DISEASES.

TYPHOID FEVER.

The admission and death rates for this disease, 3.53 and 0.19, were the lowest for any year of record in this office; the case mortality was 5.6 per cent.

The death rate, 0.19, is only about two-thirds of that of the civilian population of the United States, 0.28, as shown by the last report of the Bureau of the Census, and considerably less than half that of the civilian population of the military age.

The following comparative table shows the most important changes in the admission rate at posts:

Post.	1906.	1907.
Fort Snelling	18	.....
Fort Oglethorpe	11	4
Fort Riley	8	2
Fort Schuyler	7	.....
Washington Barracks (post)	6	.....
Columbus Barracks	5	10
Fort Sam Houston	2	16
Fort Leavenworth	4	12
Fort Thomas	2	7
Fort Slocum	1	6

The disappearance of typhoid fever at Fort Snelling, Minn., appears to have been due to the departure from that post of the infected troops, the disease, however, appearing at their new station.

The marked improvement at Fort Oglethorpe is attributed to improved sanitary conditions at the target range, where most of the cases have heretofore been contracted; since 1906 Forbes water sterilizers, McCall incinerators, and screened kitchens have been provided.

The surgeon at Fort Riley is of opinion that none of the cases which occurred at that post in 1906 and 1907 originated there.

Chart showing the admission and death ratios per thousand of mean strength for typhoi fever, by years, since 1897, for the United States proper.

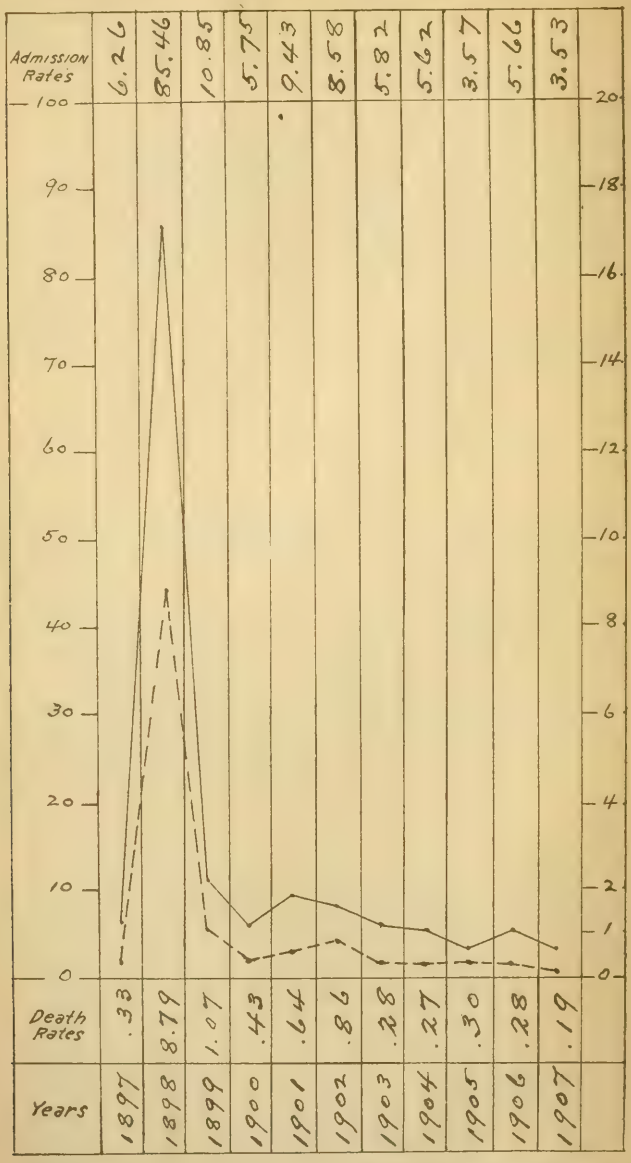
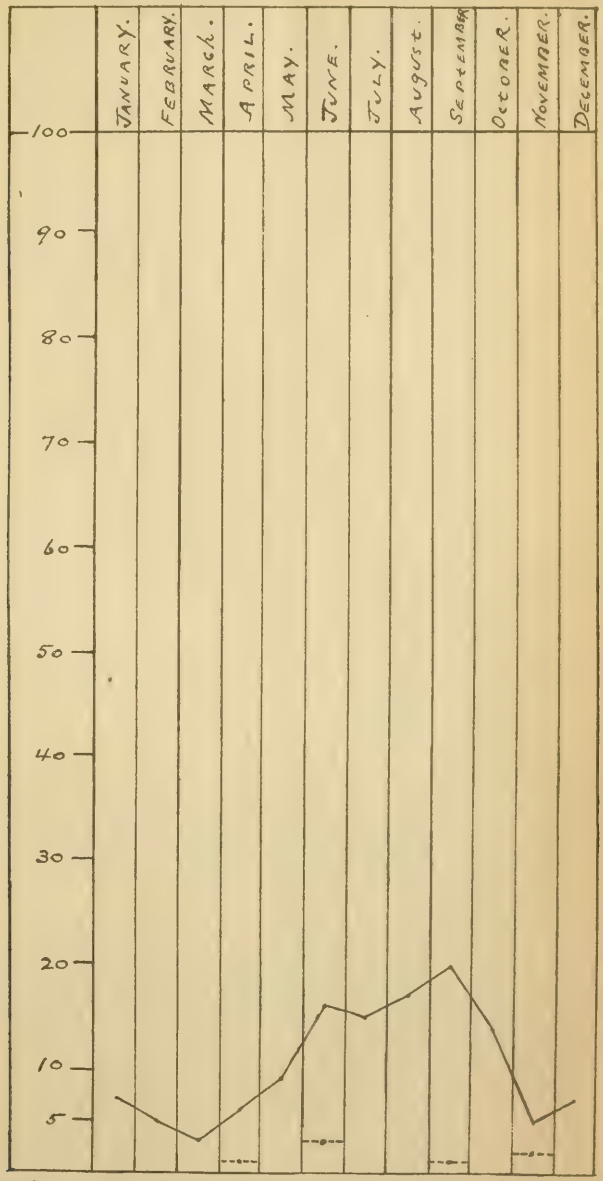


Chart showing the admissions and deaths for typhoid fever, by months, in the United States proper for the year 1907.



Admissions, —— 7 5 3 6 9 16 15 17 20 14 5 7

Deaths, ---------- 0 0 0 1 0 3 0 0 1 0 2 0

In the case of Fort Schuyler the subsidence of the outbreak is attributed by the surgeon to improved sanitary conditions, especially to the cleaning out of an old sewer and the elimination of flies.

The improvement at Washington Barracks was coincident with a fall in the rate for the city of Washington.

The increase at Columbus Barracks is ascribed to the increased prevalence of the disease in the city of Columbus and to the larger garrison exposed to infection from that source.

Of the outbreak at Fort Sam Houston, Tex., the surgeon reports:

The first case of typhoid appeared May 23, 1907, and the date of last admission was June 28, 1907.

With one exception, all the cases were confined to the field artillery and cavalry, who occupied adjacent barracks in the new post.

On the appearance of the disease, Contract Surgeon A. W. Chase, U. S. Army, immediately inspected the post. He is of the opinion that the post artesian water supply was pure and in no way responsible for the infection. The fact that the disease was practically confined to one locality in the post, although all the command used the water from this supply, substantiates this view.

Doctor Chase states that in making his inspection he found an old latrine, about 50 paces to the rear of one of the artillery barracks, which was used by employees of the contractors then employed in the construction of the new post. These employees were a mixed lot of whites, Mexicans, and negroes and resided in and around the adjacent city of San Antonio, where typhoid fever had been prevalent since some time in the preceding April, or nearly two months prior to its appearance in the post.

This latrine, Doctor Chase reports, was in an exceedingly filthy condition and that the soil for 20 feet around was contaminated to such an extent that he was obliged to put down boards upon which to walk in order to reach the building without fouling his shoes. He also reports that the flies were very numerous, and that he found that the cooks in the nearby barracks were in the habit of opening the screens to their kitchens in order to get all the ventilation possible. He states that the flies flew back and forth between the latrine and kitchens freely.

The latrine was moved; the soil about it was freely disinfected with crude phenol; the screens to all barracks were kept in position at all times; drinking water was boiled and kept in locked containers, and all excreta and clothing of suspected cases were disinfected. After the foregoing preventive measures had been in force for a little more than a month, the epidemic subsided.

I am unable to account for the case which occurred in the detachment, Ninth Infantry, it having apparently been an isolated case and not directly traceable to the epidemic in the artillery and cavalry post.

From the facts I have been able to gather, it would appear that the disease was imported from San Antonio, Tex., by contractor's employees who made use of the latrine mentioned, and from thence the infection was conveyed by flies to the kitchen of the Sixth Battery, Field Artillery, which had 7 cases; to the Third Battery, Field Artillery, which had 3 cases; and to Troop G, First Cavalry, situated on the same line, which had 4 cases.

At Fort Leavenworth all the cases are said to have been imported.

The surgeon at Fort Thomas expresses the opinion that all the cases at his post were probably contracted in Cincinnati, and that the increased number of cases was coincident with the increase in the strength of the garrison.

At Fort Slocum the disease was sporadic, all or nearly all of the cases having been contracted outside the post.

The following statement shows the distribution of typhoid fever in the United States during the year:

Typhoid fever at military stations in the United States, 1907.

Stations.	Admitted.	Days treated.	Constantly sick.	Died.
Fort Sam Houston, Tex	56	1,032	2.83	1
Fort Leavenworth, Kans	12	663	1.82	.....
Columbus Barracks, Ohio	10	582	1.59	1
Fort Thomas, Ky	7	612	1.68	.....
Fort Slocum, N. Y	6	290	.79	1
Fort Walla Walla, Wash	5	326	.89	.....
Fort Oglethorpe, Ga	4	367	1.01	1
Fort Monroe, Va	4	400	1.10	.....
Fort Moultrie, S. C	3	146	.40	.....
Fort Des Moines, Iowa	3	135	.37	.....
General hospital, Washington Barracks, D. C	2	201	.55	1
Fort Logan, Colo	2	86	.24	1
Fort Screven, Ga	2	58	.16	1
Fort Riley, Kans	2	364	1.00	.....
Jefferson Barracks, Mo	2	254	.70	.....
General hospital, Fort Bayard, N. Mex	2	185	.51	.....
Fort St. Philip, La	2	137	.38	.....
Fort Howard, Md	2	113	.31	.....
Fort Douglas, Utah	2	104	.28	.....
Fort Terry, N. Y	2	93	.25	.....
Alcatraz Island, Cal	2	91	.25	.....
Fort Caswell, N. C	2	88	.24	.....
Fort Robinson, Nebr	2	70	.19	.....
Fort McHenry, Md	2	57	.16	.....
Fort Bliss, Tex	2	54	.15	.....
Fort Wright, Wash	2	37	.10	.....
Fort Du Pont, Del	1	119	.33	.....
Fort Ontario, N. Y	1	99	.27	.....
Fort Myer, Va	1	86	.24	.....
Fort Fremont, S. C	1	85	.23	.....
Fort Wm. Henry Harrison, Mont	1	81	.22	.....
Madison Barracks, N. Y	1	73	.20	.....
Fort Columbia, Wash	1	70	.19	.....
Fort D. A. Russell, Wyo	1	60	.16	.....
Fort Clark, Tex	1	59	.16	.....
Fort Hamilton, N. Y	1	57	.16	.....
Fort Lawton, Wash	1	51	.14	.....
Fort Wayne, Mich	1	49	.13	.....
Fort McIntosh, Tex	1	46	.13	.....
Fort Niagara, N. Y	1	29	.08	.....
Fort Stevens, Oreg	1	18	.05	.....
Fort Wood, N. Y	1	5	.01	.....
Post Presidio of San Francisco, Cal	1	1	.003	.....
In the field (Camp John Smith, Jamestown, 2; naval rifle camp, Annapolis, 1; rifle range, Catoosa Springs, Ga., 1; en route near Fort Sheridan, Ill., 1)	5	14	.04	.....
All other treatment	0	658	1.80	.....
Total	124	8,205	22.48	7

UNDETERMINED FEVERS.

The admission rate for this class of fevers fell from 7.73 in 1906 to 4.67 in 1907. The following table shows the inclusions under this head:

United States

Febricula	72
Fever, ephemeral	34
Simple continued fever, origin undetermined	28
Fever, type undetermined	21
Continued fever, of undetermined origin	4
Remittent fever, not malarial, type undetermined	3
Intermittent fever, undetermined	2
Total	164

MALARIA.

The admission rate for malarial diseases, 30.20, is the lowest of which any record can be found in this office; last year the rate was 50.27. The figures are shown in detail in the following table:

Malarial infections for 1907 placed in comparison with those for 1905 and 1906.

[Ratios per 1,000 of mean strength.]

	Admitted.			Discharged on surgeon's certificate of disability.			Died.			Noneffective.		
	White.	Colored.	Total.	White.	Colored.	Total.	White.	Colored.	Total.	White.	Colored.	Total.
Nonmalignant malarial infection:												
1907	28.89	0.96	28.07							0.53	0.02	0.52
1906	46.46	17.73	44.71							.94	.35	.90
1905	1.87	1.80	1.87							.05	.04	.05
Malignant malarial infection:												
1907	1.79	.....	1.74							.09	.....	.09
1906	1.76	.81	1.70				0.03	.....	0.02	.09	.03	.08
1905	2.33	.30	2.17				.03	.....	.02	.10	.01	.09
Undetermined malarial infection:												
1907	.15	.....	.14							.005	.....	.005
1906	2.91	.40	2.76							.05	.01	.05
1905	41.94	14.42	39.80							.80	.20	.76
Malarial cachexia:												
1907	.26	.....	.26							.02	.....	.02
1906	1.07	1.21	1.08	0.05	.....	0.05				.08	.15	.09
1905	1.54	.....	1.42	08	.....	.07				.13	.....	.12
Hemoglobinuric fever:												
1907	.....	.....	.....							.....	.....	.....
1906	.....	.40	.02							.....	.02	.001
1905	.03	.....	.02							.001	.....	.001
Total malarial diseases:												
1907	31.09	.96	30.20							.65	.02	.63
1906	52.20	20.56	50.27	.05	.....	.05	.03	.....	.02	1.16	.55	1.12
1905	47.71	16.53	45.29	.08	.....	.07	.03	.....	.02	1.09	.24	1.02

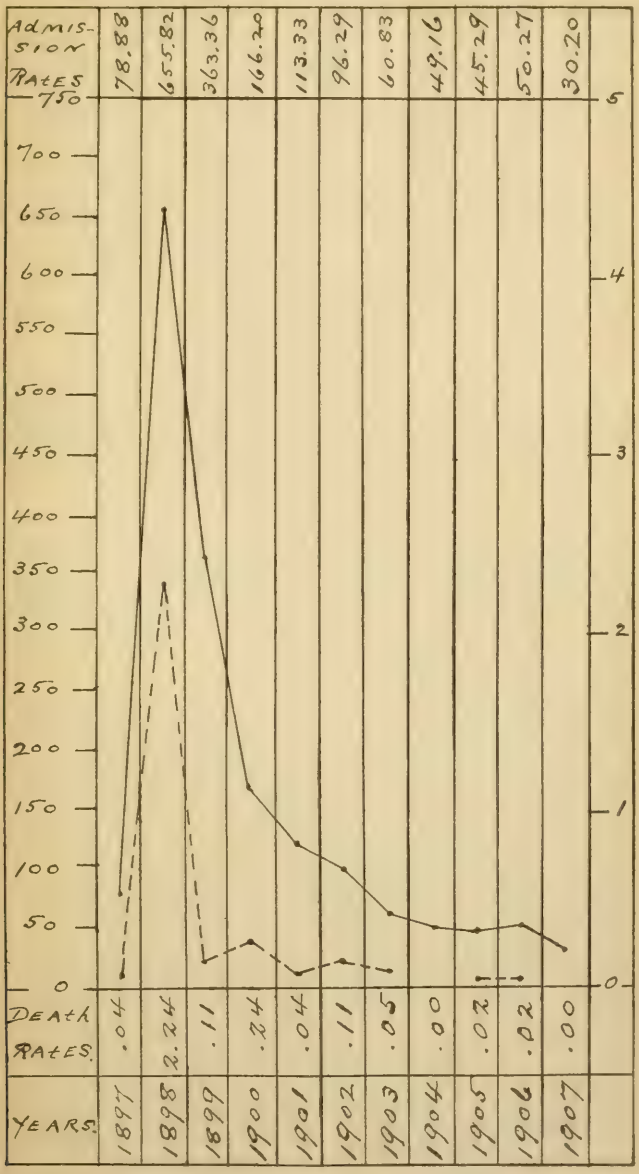
The next table shows the 10 posts having the highest admission rates for malarial diseases:

[Ratio per 1,000 of mean strength.]

	Mean strength.		Malarial diseases, total.	
	1907.	1906.	1907.	1906.
Fort Washington, Md	220	250	363.64	736.00
Fort Lincoln, N. Dak	177	111	254.24	126.13
Fort Howard, Md	232	252	185.34	214.29
Fort Hunt, Va	103	100	165.05	410.00
Fort McIntosh, Tex	203	189	128.08	42.33
West Point, N. Y	554	511	110.11	105.68
Jefferson Barracks, Mo	706	655	89.24	216.79
Fort Hamilton, N. Y	373	391	88.47	94.63
Fort Barrancas, Fla	440	496	84.09	44.35
Fort Bliss, Tex	238	283	84.03	7.07
Total United States	35,132	40,621	30.20	50.27

These are the same posts that had a like unenviable prominence last year, except that Forts Sill, Assiniboine, and Omaha have been replaced by Forts McIntosh, Bliss, and Barrancas. The greatest improvement in rates was noted at Fort Hunt, from 410.00 to 165.05; Jefferson Barracks, 216.79 to 89.24; and Fort Washington, 736.00 to

Chart showing the relative admission and death ratios per thousand of mean strength, by years, since 1897, for malarial fevers in the United States proper.



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363.64. Forts Bliss and McIntosh showed a tremendous increase in malaria, probably due to the arrival at those posts of the Nineteenth Infantry from the Philippine Islands; the great increase at Fort Lincoln was probably due to a similar cause, while the increase at Fort Barrancas was not accounted for.

SMALLPOX.

There were only 4 admissions for smallpox and no deaths.

MEASLES AND MUMPS.

These diseases were unusually prevalent but attended by no mortality.

INFLUENZA.

Influenza was epidemic during the year; only 1 death resulted.

DYSENTERY.

The admission rate for dysentery was 4.18, as compared with 5.96 for the previous year; there were no deaths; two-thirds of the infections were amebic.

CEREBRO-SPINAL FEVER.

There were 33 cases of this disease during the year with 20 deaths. Of these, 20 cases with 10 deaths resulted from a sharp epidemic of the disease at the recruit depot, Jefferson Barracks; a couple of cases occurred at the Columbus Barracks recruit depot and the rest were scattered all over the country and nearly all in recruits recently arrived from one of the recruit depots.

Of the outbreak at Jefferson Barracks the surgeon reported that influenza was prevailing quite extensively when cerebro-spinal meningitis made its appearance, and as moderate cases of cerebro-spinal meningitis in an early stage resemble influenza, the interesting question at once arises of how the differential diagnosis can be made. In this connection he invited attention to the great value of *Kernig's sign* which was present in every case whose subsequent course proved to be cerebro-spinal meningitis, and not otherwise. During the coincidence of the two diseases it is invaluable. On February 12 three cases of cerebro-spinal meningitis were admitted to hospital, one from the seventeenth recruit company and two from the eighteenth recruit company. Two of these men died February 15 and the other on the 17th. February 16 one case occurred in the nineteenth recruit company; February 23 two cases occurred in the sixteenth recruit company, and one in the same company on the 24th and 27th, respectively. On the 28th one case each occurred in the fifteenth, sixteenth, eighteenth, and nineteenth. Thus it is seen that within sixteen days of its first appearance it had spread to every company except the band, and up to date (March 28, 1907) no case has occurred in that organization.

On March 1 a private, first class, hospital corps, age 20, who was nursing these cases, contracted the disease and on March 4 one patient in hospital who had assisted with these cases was taken sick with it.

Etiology.—It is difficult to give any satisfactory reason for the origin of the disease at this post. The sanitary condition of the post

was good. There was no overcrowding, excessive fatigue from drills, etc., and in fact none of the factors that are generally considered to have a causative effect. Age was a markedly predisposing cause. Out of the 20 cases which have occurred to date but one man was over 23 years of age and the average age was 21½. The hospital corps private who contracted it from cases he was nursing was 20 and the patient who similarly contracted it was 22. In case this disease should appear at other depots the very young members of the hospital corps should not be put on duty to nurse cases of this disease, but the oldest men assigned. The infection gradually but steadily spread from barrack to barrack, but nowhere else. No officers or their families, no civilians, or other persons living on the reservation and not in contact with cases contracted it. It is believed that the disease is contagious for those susceptible to it, but that in a given number of young people relatively few are susceptible.

TUBERCULOSIS.

The admission and death rates for tuberculosis, 4.90 and 0.53, compare favorably with those for 1906, 5.22 and 0.78, respectively.

A well-marked instance of contact infection occurred during the year at Fort Williams, Me., in which 4 cases of pulmonary tuberculosis were discovered in one company in the course of one month; removal of the patients followed by disinfection of the barracks put an end to the outbreak.

Another point bearing on contact infection is the undue prevalence of the disease in members of the hospital corps; the admission rate for these men was about twice as great as for the other arms of the service.

VENEREAL DISEASES.

Both the admission and noneffective rates were higher than for 1906, though lower than for 1905. The increase was in the admissions for chancroid. The details are given in the following table:

Venereal diseases.

[Ratios per 1,000 of mean strength.]

	Admitted.			Discharged on surgeon's certificate of disability.			Died.			Noneffective.		
	White.	Colored.	Total.	White.	Colored.	Total.	White.	Colored.	Total.	White.	Colored.	Total.
Gonorrhea, including other venereal:												
1907	107.68	107.59	107.68	1.37	1.92	1.39	.....	0.96	0.03	6.29	4.63	6.24
1906	106.11	91.49	105.21	1.11	.40	1.07	0.03	.....	.02	6.29	4.48	6.18
1905	120.12	97.05	118.31	1.25	1.80	1.29	.03	.....	.02	6.46	4.08	6.26
Chancroid:												
1907	34.38	48.03	34.78	.....	.....	.....	.....	.....	.....	2.21	2.73	2.23
1906	26.01	32.65	26.41	.03	.40	.05	.....	.....	.....	1.69	2.48	1.73
1905	30.27	31.85	30.39	.05	.....	.05	.....	.....	.....	1.88	2.08	1.90
Syphilis:												
1907	25.43	23.05	25.36	2.43	.....	2.36	.....	.....	.....	2.76	2.45	2.75
1906	27.34	26.20	27.28	2.90	1.19	2.79	.03	.40	.05	3.02	2.40	2.98
1905	30.40	25.54	30.02	3.37	2.70	3.32	.....	.30	.02	2.93	2.34	2.88
Total venereal:												
1907	167.49	178.67	167.82	3.80	1.92	3.74	.....	.96	.03	11.26	9.81	11.22
1906	159.47	150.34	158.91	4.03	1.98	3.91	.05	.40	.07	11.00	9.36	10.90
1905	180.70	154.44	178.72	4.66	4.51	4.66	.03	.30	.04	11.27	8.50	11.05

ALCOHOLISM.

This disease also continues to show a steady increase, as exhibited in the chart on the next page.

INSANITY.

There was a slight increase in the admission rate, from 1.33 in 1906, to 1.79 in 1907.

PNEUMONIA.

Pneumonia gave a slightly increased number of admissions and considerably higher case mortality.

DIARRHEA AND ENTERITIS.

There was a notable improvement in respect to these diseases, the admission rate for which was reduced nearly one-half.

INTESTINAL PARASITES.

The admission rate for this class of diseases has increased from 1.54 to 1.74. An examination of the feces of 2 officers and 19 men at Fort Logan H. Roots, and recently returned from the Philippine Islands, showed that all were infected with *Ankylostomum duodenale*, and 80 per cent in addition with the *Hymenolepsis nana;* 8 of the cases were on sick report for intestinal fevers, 7 for other complaints, and 6 were not on sick report.

INFLUENCE OF STATION.

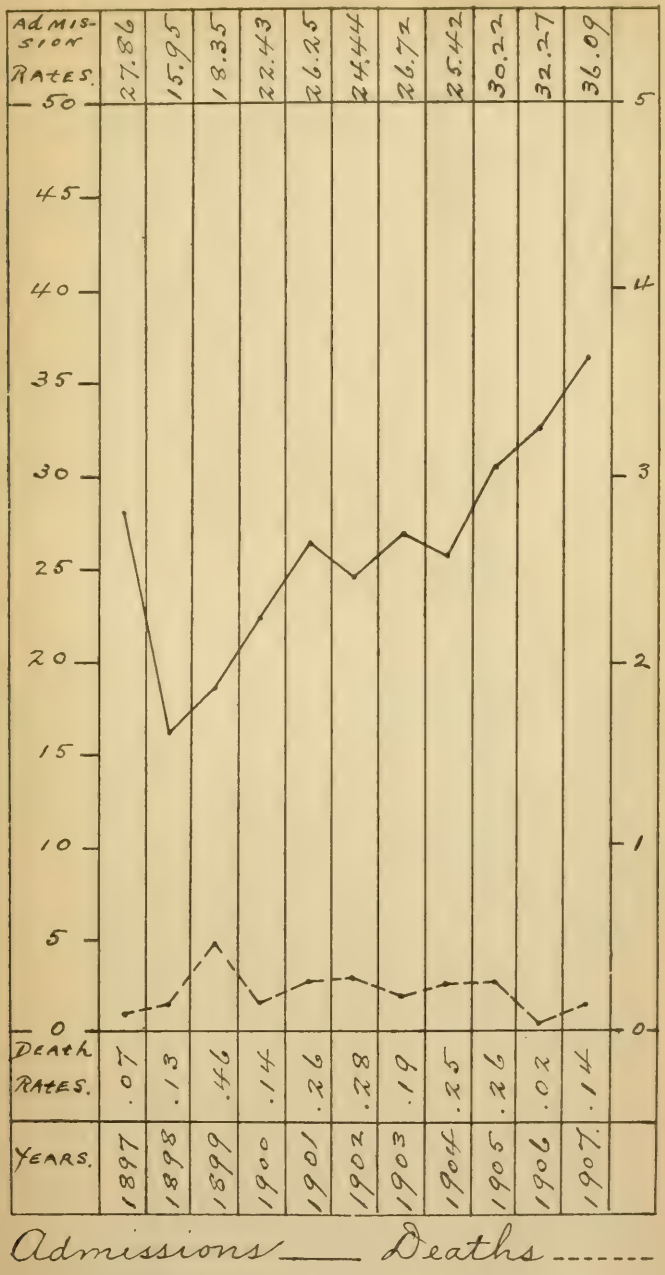
(See tables pp. 54–56.)

The highest admission and noneffective rates and the lowest death rate occurred in the Department of the Gulf, while the lowest admission and noneffective rates were noted in the Department of California, and the highest death rate in the Department of the Columbia. The high death rate in the Department of the Columbia was due to the occurrence of 6 deaths from pneumonia and 3 from cerebro-spinal fever.

The Department of the Lakes had the highest rate for typhoid fever, while the Department of Dakota had the lowest. The Department of Dakota had the highest rate for malaria and the Department of the Columbia the lowest. The Department of California had the lowest rate for pneumonia, while the Department of the Columbia had the highest, the latter department also had the highest rate for tuberculosis and the lowest for dysentery.

The following tables are arranged to show the posts having the highest and lowest ratios for admissions and noneffectiveness in the United States as a whole:

Chart showing the relative admission and death ratios per thousand of mean strength for alcoholism in the United States proper, by years, since 1897.



Posts having the highest admission and noneffective rates.[a]

	Mean strength.	Ratios per 1,000 of mean strength.												Average number of days lost.			
		Admissions to sick report.		Discharges on surgeon's certificate of disability.		Deaths.		Total losses.		Noneffective from sickness.				From all causes.		Excluding injuries, venereal diseases, and alcoholism.	
										From all causes.		Excluding injuries, venereal diseases, and alcoholism.					
		From all causes.	Excluding injuries, venereal diseases, and alcoholism.	From all causes.	Excluding injuries, venereal diseases, and alcoholism.	From all causes.	Excluding injuries, venereal diseases, and alcoholism.	From all causes.	Excluding injuries, venereal diseases, and alcoholism.	Total.	In hospital.	Total.	In hospital.	For each soldier.	For each case.	For each soldier.	For each case.
Highest admission rates from all causes.																	
Fort Oglethorpe, Ga	547	1,848.26	1,124.31	16.45	9.14	1.83	1.83	18.28	10.97	71.51	49.97	31.11	19.90	26.10	14.12	11.35	10.10
Fort Ethan Allen, Vt	338	1,612.43	831.36	5.92	2.96	8.88	.....	14.80	2.96	45.85	33.30	17.50	12.93	16.73	10.38	6.39	7.68
Fort Moultrie, S. C	451	1,607.54	926.83	13.30	11.09	.....	.....	13.30	11.09	52.39	50.44	22.48	21.40	19.12	11.90	8.21	8.85
Key West Barracks, Fla	257	1,490.27	918.29	23.35	11.67	.....	.....	23.35	11.67	45.39	28.19	21.25	11.61	16.57	11.12	7.75	8.44
Fort Washington, Md	220	1,468.18	1,000.00	18.18	9.09	13.64	.....	31.82	9.09	42.29	34.55	19.59	14.10	15.44	10.51	7.15	7.15
Highest admission rates, excluding injuries, etc.																	
Fort Oglethorpe, Ga	547	1,848.26	1,124.31	16.45	9.14	1.83	1.83	18.28	10.97	71.51	49.97	31.11	19.90	26.10	14.12	11.35	10.10
Fort Washington, Md	220	1,468.18	1,000.00	18.18	9.09	13.64	.....	31.82	9.09	42.29	34.55	19.59	14.10	15.44	10.51	7.15	7.15
Fort Crook, Nebr	366	1,437.16	953.55	38.25	21.86	5.46	2.73	43.71	24.59	38.89	35.25	22.73	20.97	14.19	9.88	8.30	8.70
Fort Wright, Wash	280	1,382.14	935.71	10.71	10.71	10.71	10.71	21.42	21.42	47.46	40.24	26.98	24.86	17.32	12.53	9.85	10.52
Fort Moultrie, S. C	451	1,607.54	926.83	13.30	11.09	.....	.....	13.30	11.09	52.39	50.44	22.48	21.40	19.12	11.90	8.21	8.85
Highest noneffective rates from all causes.																	
Fort Oglethorpe, Ga	547	1,848.26	1,124.31	16.45	9.14	1.83	1.83	18.28	10.97	71.51	49.97	31.11	19.90	26.10	14.12	11.35	10.10
Fort Thomas, Ky	427	1,456.67	798.59	16.39	16.39	.....	.....	16.39	16.39	60.49	51.12	29.61	25.72	22.08	15.16	10.81	13.53
Fort Myer, Va	408	1,384.80	772.06	29.41	14.71	4.90	.....	34.31	14.71	54.43	42.22	21.28	15.36	19.87	14.35	7.77	10.06
Fort Barrancas, Fla	440	1,393.18	865.91	20.45	11.36	2.27	.....	22.72	11.36	54.30	28.09	26.76	15.11	19.82	14.23	9.77	11.28
Fort Moultrie, S. C	451	1,607.54	926.83	13.30	11.09	.....	.....	13.30	11.09	52.39	50.44	22.48	21.40	19.12	11.90	8.21	8.85

Highest noneffective rates, excluding injuries, etc.																	
Fort Oglethorpe, Ga.	547	1,848.26	1,124.31	16.45	9.14	1.83	1.83	18.28	10.97	71.51	49.97	31.11	19.90	26.10	14.12	11.35	10.10
Fort Jay, N. Y.	236	648.31	411.02	25.42	16.95	8.47	4.24	33.89	21.19	46.82	44.16	30.95	29.99	17.09	26.36	11.30	27.48
Fort Thomas, Ky.	427	1,456.67	798.59	16.39	16.39	.....	.....	16.39	16.39	60.49	51.12	29.61	25.72	22.08	15.16	10.81	13.53
Fort William Henry Harrison, Mont.	204	1,328.43	867.65	4.90	.....	.....	.....	4.90	.....	47.61	46.40	28.70	27.99	17.38	13.08	10.48	12.07
Fort Snelling, Minn.	457	1,459.52	910.28	24.07	13.13	8.75	2.19	32.82	15.32	48.54	45.42	27.90	26.34	17.72	12.14	10.18	11.19

Posts having the lowest admission and noneffective rates.[a]

Lowest admission rates from all causes.																	
Fort Du Pont, Del.	210	242.86	161.90	.....	.....	4.76	4.76	4.76	4.76	5.71	5.64	3.37	3.30	2.09	8.59	1.23	7.59
Fort Reno, Okla.	270	611.11	351.85	7.41	3.70	3.70	.....	11.11	3.70	35.81	31.05	16.83	15.48	13.07	21.39	6.14	17.46
Fort Jay, N. Y.	236	648.31	411.02	25.42	16.95	8.47	4.24	33.89	21.19	46.82	44.16	30.95	29.99	17.09	26.36	11.30	27.48
Presidio of San Francisco, Cal. (post)	1,099	695.18	388.53	6.37	3.64	1.82	.....	[b] 8.19	[b] 3.64	[b] 6.54	(b)	[b] 3.93	(b)	[b] 2.39	[b] 3.44	[b] 1.43	[b] 3.69
Fort Banks, Mass.	243	716.05	436.21	.....	.....	8.23	4.12	8.23	4.12	24.36	22.40	8.37	7.50	8.89	12.42	3.05	7.00
Lowest admission rates, excluding injuries, etc.																	
Fort Du Pont, Del.	210	242.86	161.90	.....	.....	4.76	4.76	4.76	4.76	5.71	5.64	3.37	3.30	2.09	8.59	1.23	7.59
Fort Reno, Okla.	270	611.11	351.85	7.41	3.70	3.70	.....	11.11	3.70	35.81	31.05	16.83	15.48	13.07	21.39	6.14	17.46
Fort Lawton, Wash.	238	815.13	373.95	4.20	4.20	25.21	21.01	29.41	25.21	50.39	45.85	19.71	19.13	18.39	22.56	7.19	19.24
Presidio of San Francisco, Cal. (post)	1,099	695.18	388.53	6.37	3.64	1.82	.....	[b] 8.19	[b] 3.64	[b] 6.54	(b)	[b] 3.93	(b)	[b] 2.39	[b] 3.44	[b] 1.43	[b] 3.69
Fort Jay, N. Y.	236	648.31	411.02	25.42	16.95	8.47	4.24	33.89	21.19	46.82	44.16	30.95	29.99	17.09	26.36	11.30	27.48
Lowest noneffective rates from all causes.																	
Fort Du Pont, Del.	210	242.86	161.90	.....	.....	4.76	4.76	4.76	4.76	5.71	5.64	3.37	3.30	2.09	8.59	1.23	7.59
Fort Hamilton, N. Y.	373	788.20	501.34	10.72	5.36	2.68	.....	13.40	5.36	20.21	18.66	9.72	9.12	7.38	9.36	3.55	7.07
Fort Bliss, Tex.	238	1,008.40	680.67	33.61	29.41	.....	.....	33.61	29.41	23.43	21.49	13.74	13.09	8.55	8.48	5.02	7.37
Presidio of Monterey, Cal.	726	906.34	588.15	13.77	5.51	2.75	1.38	16.52	6.89	23.67	16.60	13.71	9.74	8.64	9.53	5.01	8.51
Fort Banks, Mass.	243	716.05	436.21	.....	.....	8.23	4.12	8.23	4.12	24.36	22.40	8.37	7.50	8.89	12.42	3.05	7.00
Lowest noneffective rates, excluding injuries, etc.																	
Fort Du Pont, Del.	210	242.86	161.90	.....	.....	4.76	4.76	4.76	4.76	5.71	5.64	3.37	3.30	2.09	8.59	1.23	7.59
Fort Banks, Mass.	243	716.05	436.21	.....	.....	8.23	4.12	8.23	4.12	24.36	22.40	8.37	7.50	8.89	12.42	3.05	7.00
Fort Hamilton, N. Y.	373	788.20	501.34	10.72	5.36	2.68	.....	13.40	5.36	20.21	18.66	9.72	9.12	7.38	9.36	3.55	7.07
Fort Hancock, N. J.	440	868.18	584.09	6.82	6.82	2.27	2.27	9.09	9.09	24.55	22.35	11.50	10.44	8.96	10.32	4.20	7.19
Fort Huachuca, Ariz.	235	1,093.61	668.09	17.02	8.51	.....	.....	17.02	8.51	27.47	23.33	12.16	11.33	10.03	9.17	4.44	6.64

[a] Recruit depots not considered.

[b] All cases at Presidio of San Francisco, Cal. (post), requiring hospital treatment are transferred to general hospital, San Francisco, Cal., where treated and disposed of; the same is true of Cantonment, Presidio of San Francisco, Cal., neither of which stations will be considered in comparing noneffectiveness from sickness.

Posts having the lowest admission and noneffective rates—Continued.

RECRUIT DEPOTS.

	Mean strength.	Ratios per 1,000 of mean strength.										Average number of days lost.			
		Admissions to sick report.		Discharges on surgeon's certificate of disability.		Deaths.		Total losses.		Noneffective from sickness.				From all causes.		Excluding injuries, venereal diseases, and alcoholism.	
										From all causes.		Excluding injuries, venereal diseases, and alcoholism.					
		From all causes.	Excluding injuries, venereal diseases, and alcoholism.	From all causes.	Excluding injuries, venereal diseases, and alcoholism.	From all causes.	Excluding injuries, venereal diseases, and alcoholism.	From all causes.	Excluding injuries, venereal diseases, and alcoholism.	Total.	In hospital.	Total.	In hospital.	For each soldier.	For each case.	For each soldier.	For each case.
Columbus Barracks, Ohio	811	1,683.11	1,077.68	83.85	64.12	11.10	7.40	94.95	71.52	52.23	48.51	33.97	31.73	19.06	11.33	12.40	11.51
Jefferson Barracks, Mo	706	2,582.15	1,226.63	90.65	41.08	17.00	14.16	107.65	55.24	83.00	60.67	35.35	30.72	30.29	11.73	12.91	10.52
Fort Slocum, N. Y	806	2,584.37	1,600.50	80.65	64.52	6.20	2.48	86.85	67.00	58.36	49.64	37.53	33.89	21.30	8.24	13.70	8.56

Fort Oglethorpe, Ga., which in 1906 had the highest noneffective rate of any post in the United States, this year had both the highest noneffective and the highest admission rates. The cause of this unenviable prominence was an epidemic of influenza which occurred in February and March, an epidemic of measles which occurred in March, April, and May, and to the unusual prevalence of venereal diseases throughout the year.

The post having the next highest admission rate was Fort Ethan Allen, Vt., and the next highest noneffective rate Fort Thomas, Ky. The lowest admission and noneffective rates occurred at Fort Du Pont, Del.

The recruit depots, in which all the rates are high, are considered separately, as large numbers of men are there kept under observation to determine their fitness for service and the conditions are quite different from those at ordinary posts.

INFLUENCE OF AGE AND LENGTH OF SERVICE.

The following tables exhibit the effects of age and length of service upon rates for disease:

Length of service.	Mean strength.	Admitted.	Discharged on surgeon's certificate of disability.	Died	Constantly noneffective.	Ratios per 1,000 of mean strength. Admitted.	Discharged on surgeon's certificate of disability.	Died.	Constantly noneffective.
Under 1 year	8,607	12,580	358	45	429.45	1,461.49	40.61	4.09	49.89
1 to 2 years	5,121	5,107	118	9	219.83	997.27	22.43	1.71	42.93
2 to 3 years	6,563	5,646	96	10	225.48	860.28	14.24	1.48	34.36
3 to 4 years	2,510	1,808	35	2	75.38	720.32	13.58	.78	30.03
4 to 5 years	1,764	1,223	31	2	55.93	693.31	17.11	1.10	31.71
5 to 10 years	7,171	5,099	121	26	243.33	711.06	16.43	3.53	33.93
10 years and over	3,396	2,119	50	23	95.27	623.97	14.33	6.59	28.05
Total	35,132	33,582	809	117	1,344.65	955.88	22.42	3.24	38.27

Age.	Mean strength.	Admitted.	Discharged on surgeon's certificate of disability.	Died.	Constantly noneffective.	Ratios per 1,000 of mean strength. Admitted.	Discharged on surgeon's certificate of disability.	Died.	Constantly noneffective.
19 years and under	1,062	1,524	35	6	49.29	1,435.03	32.08	5.50	46.42
20 to 24 years	14,599	17,616	387	46	661.02	1,206.66	25.81	3.07	45.28
25 to 29 years	9,949	8,291	214	27	347.27	833.35	20.94	2.64	34.90
30 to 34 years	4,819	3,230	96	14	146.01	670.26	19.39	2.83	30.30
35 to 39 years	2,453	1,524	47	6	73.81	621.28	18.66	2.38	30.09
40 to 44 years	1,246	705	15	5	30.64	565.81	11.72	3.91	24.59
45 to 49 years	685	429	9	6	21.88	625.36	12.77	8.51	31.90
50 years and over	318	263	6	7	14.74	827.04	18.35	21.41	46.34
Total	35,132	33,582	809	117	1,344.65	955.88	22.42	3.24	38.27

As has been uniformly the case in the past, all the rates except the death rate were highest in the youngest soldiers and those of least service; the highest death rates occurred in those soldiers upwards of 50 years of age and of over ten years' service. The lowest admission and noneffective rates occurred in soldiers between the ages of 40 to 44 years, and of long service.

INFLUENCE OF SEASON.

The highest admission rate occurred in December, the highest noneffective rate in January, and the highest death rate in March. The following table shows the movement of sick by months:

Ratios per 1,000 of mean strength.

Month.	Mean strength.	All causes.					Exclusive of venereal diseases, alcoholism, and injuries.			Prevailing diseases (exclusive of venereal diseases, etc.).
		Admissions.			Noneffective.		Admissions.	Deaths.	Noneffective.	
		Total.	Hospital	Deaths.	Total.	Hospital.				
Jan....	37,302	111.66	80.67	0.60	49.57	41.10	71.26	0.34	28.01	Influenza, 379; tonsillitis, 328; acute bronchitis, 282; muscular rheumatism, 108.
Feb....	37,297	101.54	72.69	.58	49.40	41.20	64.64	.37	28.23	Influenza, 543; tonsillitis, 243; acute bronchitis, 202; muscular rheumatism, 80.
Mar....	36,812	104.45	77.86	.67	47.39	40.37	68.29	.45	27.98	Tonsillitis, 353; influenza, 297; acute bronchitis, 164; measles, 122; muscular rheumatism, 102.
Apr....	36,451	101.62	76.65	.44	45.46	39.63	63.18	.33	27.83	Tonsillitis, 270; acute bronchitis, 192; influenza, 146; measles, 140; muscular rheumatism, 91.
May...	36,274	94.28	70.99	.61	43.52	37.75	57.64	.28	24.89	Tonsillitis, 202; diarrhea and enteritis, 151; acute bronchitis, 127; malarial fevers, 118; measles, 103; influenza, 99.
June...	35,102	89.62	63.47	.36	42.82	36.83	49.80	.17	23.52	Malarial fevers, 138; tonsillitis, 128; diarrhea and enteritis, 126; dyspepsia, 84; constipation, 77; muscular rheumatism, 74.
July...	34,166	96.15	67.64	.60	43.50	37.39	54.59	.11	23.64	Diarrhea and enteritis, 261; malarial fevers, 132; dyspepsia, 107; tonsillitis, 95; muscular rheumatism, 80.
Aug...	32,854	95.64	66.57	.35	44.60	37.98	54.27	.18	24.63	Diarrhea and enteritis, 244; malarial fevers, 136; dyspepsia, 118; furuncles, 99; acute bronchitis and tonsillitis, 80 each.
Sept...	32,550	83.41	60.86	.45	43.81	37.81	44.33	.24	23.58	Diarrhea and enteritis, 135; malarial fevers, 109; acute bronchitis, 92; dyspepsia, 80; furuncles, 78; muscular rheumatism, 74.
Oct....	32,931	85.76	61.77	.27	43.24	37.39	46.07	.12	23.90	Acute bronchitis, 125; tonsillitis, 119; diarrhea and enteritis, 103; dyspepsia, 75; muscular rheumatism, 68.
Nov...	34,207	89.25	65.16	.31	43.91	38.01	48.56	.22	24.18	Acute bronchitis, 159; tonsillitis, 150; muscular rheumatism, 89; furuncles, 83; dyspepsia, 79.
Dec....	35,637	114.77	91.87	.36	44.91	39.15	72.73	.23	26.13	Influenza, 462; tonsillitis, 327; acute bronchitis, 221; muscular rheumatism, 94; constipation, 77.
Total	35,132	1,172.04	859.59	5.63	45.22	38.74	699.82	3.08	25.60	Tonsillitis, 2,347; influenza, 2,037; acute bronchitis, 1,782; diarrhea and enteritis, 1,384; malarial fevers, 1,061; muscular rheumatism, 1,019.

INFLUENCE OF RACE.

As a general rule in the past all the rates for colored troops except the death rate have been lower than for white troops. In 1907, however, all the rates, except the admission rate, were higher for the colored soldiers, the death rate was more than twice as high, and the discharge for disability rate almost double.

The principal causes of the high death rate among the colored soldiers were tuberculosis and pneumonia. The relative prevalence of certain special diseases among white and colored troops with the admission rates per 1,000 for each, are shown in the following table:

Special diseases.	Admission rates.	
	White	Colored.
Venereal diseases	167.49	178.67
Influenza	59.08	22.09
Diarrhea, including enteritis	40.19	13.45
Alcoholism	36.93	8.65
Malaria	31.09	1.96
Measles	14.23	1.92
Rheumatism, acute articular	9.12	17.29
Tuberculosis, all	4.75	9.61
Dysentery	4.28	.96
Typhoid fever	3.61	.96
Pneumonia, lobar	2.41	6.72
Cerebro-spinal fever	.97	.....
Frost bite and freezing	.59	1.92
Hepatic abscess	.32	.....

DISCHARGES FOR DISABILITY.

The disability discharge rate, 25.36, shows a notable improvement over that for 1906, when the rate was 32.29. The marked reduction is probably due to the fact that since about the 1st of August, 1906, all recruits must pass the scrutiny of an officer of the Medical Corps.

The principal causes of discharges, with the percentage of the total discharges, were as follows: (1) Tuberculosis, 17.53; (2) venereal diseases, 16.67; (3) insanity, 6.91; (4) epilepsy, 6.30; (5) congenital malformations and arrested development, 5.80. The greatest improvement was noted in the figures for defective vision and hearing and those for organic diseases of the heart. The proportion of those discharged for disabilities which existed before enlistment has been reduced from 51 per cent to 33 per cent.

The details are shown in the following table:

Discharges for disability, year 1907.

Cause of discharge.	Number discharged.	Percentage of total discharges.	Discharges for disability.				
			In line of duty.	Not in line of duty.		Discharged for disability before assignment.	
				Contracted before enlistment.	Contracted after enlistment.	In line of duty.	Not in line of duty.
DISEASES.							
General diseases	351	43.39	176	46	129	7	50
Tuberculosis (of the lungs, 134; of other organs, 8)	142	17.53	135	7	.....	2	2
Venereal diseases	135	16.67	2	20	113	.....	44
Syphilis (primary, 9; secondary, 65; tertiary, 11)	85	10.50	.....	12	73	.....	27
Gonorrhea (chronic gonorrhea, 18; epididymitis, 3; ophthalmia, 7; rheumatism, 17; stricture, 2; other results, 3)	50	6.17	2	8	40	.....	17
Chronic alcoholism	19	2.35	.....	10	9	.....	1
Dysentery (amebic, 10; catarrhal, 2; undetermined, 1)	13	1.60	13	.....	.....	1	.....
Chronic articular rheumatism	13	1.60	13	.....	.....	.....	.....
Drug habit (morphinism, 9; cocainism, 3)	12	1.48	.....	5	7	.....	1
Cerebro-spinal meningitis epidemic	5	.62	5	.....	.....	4	.....
Exophthalmic goiter	4	.49	1	3	.....	.....	1
Diabetes	3	.37	2	1	.....	.....	1
Cancer	3	.37	3	.....	.....	.....	.....
Tumor (character undetermined)	1	.12	1	.....	.....	.....	.....
Anemia	1	.12	1	.....	.....	.....	.....
Diseases of the nervous system	154	19.01	56	84	14	.....	34
Insanity	56	6.91	29	17	10	.....	4
Epilepsy	51	6.30	5	46	.....	.....	24
Other diseases of the nervous system (hysteria, 4; instability of the nervous system, 3; obscure disease of spinal cord or nerve, 1; somnambulism, 1; onanism, 1)	10	1.23	1	8	1	.....	5
Paralysis without specific cause	7	.86	3	3	1	.....	.....
Other diseases of the spinal cord (progressive muscular atrophy, 2; sclerosis, 4)	6	.74	6	.....	.....	.....	.....
Neuritis	6	.74	5	.....	1	.....	.....
Neurasthenia	6	.74	4	2	.....	.....	.....
Melancholia	5	.62	.....	4	1	.....	1
Locomotor ataxia	2	.25	2	.....	.....	.....	.....
Chorea	2	.25	.....	2	.....	.....	.....
Neuralgia	2	.25	1	1	.....	.....	.....
Hypochondriasis	1	.12	.....	1	.....	.....	.....
Diseases of the circulatory system	64	7.90	41	23	.....	3	10
Organic diseases of the heart	40	4.94	30	10	.....	2	3
Cardiac irritability	8	.99	3	5	.....	1	2
Varicose veins	5	.62	3	2	.....	.....	1
Angina pectoris	3	.37	.....	3	.....	.....	2
Varicocele	3	.37	.....	3	.....	.....	2
Aneurism	2	.25	2	.....	.....	.....	.....
Other diseases of the arteries	2	.25	2	.....	.....	.....	.....
Other diseases of the circulatory system	1	.12	1	.....	.....	.....	.....
Diseases of the digestive system	47	5.80	26	21	.....	3	16
Hernia (inguinal, 27; ventral, 2)	29	3.58	14	15	.....	3	14
Appendicitis	6	.74	4	2	.....	.....	1
Diseases of the teeth	2	.25	1	1	.....	.....	.....
Chronic dyspepsia	2	.25	1	1	.....	.....	.....
Chronic gastritis	2	.25	1	1	.....	.....	.....
Enteritis	2	.25	2	.....	.....	.....	.....
Other diseases of the liver	2	.25	1	1	.....	.....	1
Chronic gasterectasis	1	.12	1	.....	.....	.....	.....
Chronic abscess of liver	1	.12	1	.....	.....	.....	.....
Diseases of the organs of special sense	47	5.80	26	21	.....	4	10
Diseases of middle and internal ear (otitis media, 20; deafness, 5; perforation of membranous tympanum, 1)	26	3.21	17	9	.....	4	6
Other diseases of the eye (squint, 2; neuritis, 2; panophthalmitis, 1)	5	.62	3	2	.....	.....	2
Errors of refraction	4	.49	.....	4	.....	.....	1
Trachoma	3	.37	.....	3	.....	.....	1
Diseases of the globe (chronic retinitis, 1; detached retina, 1; progressive chorio-retinitis, 1)	3	.37	2	1	.....	.....	.....
Chronic conjunctivitis	2	.25	1	1	.....	.....	.....
Cataract	2	.25	2	.....	.....	.....	.....
Amblyopia	1	.12	1	.....	.....	.....	.....
Chronic otitis externa	1	.12	.....	1	.....	.....	.....

Discharges for disability, year 1907—Continued.

Cause of discharge.	Number discharged.	Percentage of total discharges.	Discharges for disability.				
			Not in line of duty.			Discharged for disability before assignment.	
			In line of duty.	Contracted before enlistment.	Contracted after enlistment.	In line of duty.	Not in line of duty.
DISEASES—continued.							
Congenital malformation and arrested development	47	5.86	.....	47	.....	.....	10
Diseases of the organs of locomotion	38	4.69	24	13	1	2	4
Diseases of the joints (arthritis, 7; flat feet, 6; chronic bursitis, 3; ankylosis, 3; chronic synovitis, 2; bunion, 1; hammer toe, 1)	23	2.84	15	7	1	1	2
Diseases of the bones (osteitis and periostitis, 5; curvature of spine, 3; necrosis, 1; osteoma, 1; exostosis, 1)	11	1.36	5	6	.....	.....	2
Muscular rheumatism	3	.37	3	.....	.....	.....	.....
Atrophy, muscles of leg	1	.12	1	.....	.....	1	.....
Diseases of the genito-urinary system	33	4.07	8	23	2	.....	16
Diseases of the bladder (chronic cystitis, 3; enuresis, 13)	16	1.98	1	14	1	.....	9
Diseases of the kidneys (Bright's disease, 6; pyelonephritis, 2; pyelitis, 1; acute nephritis, 1; pyonephrosis, 1; renal calculus, 1)	12	1.48	6	6	.....	.....	4
Diseases of the testicles (epididymitis, 2; undescended testicle, 2; hydrocele, 1)	5	.62	1	3	1	.....	3
Diseases of the respiratory system	22	2.72	13	9	.....	1	3
Diseases of the lungs (asthma, 9; pleuritis, 4; chronic bronchitis, 4)	17	2.10	10	7	.....	1	3
Chronic nasal catarrh	3	.37	2	1	.....	.....	.....
Goiter	2	.25	1	1	.....	.....	.....
Diseases of the skin (bromidrosis, 1; abscess, 2; corns, 1, chronic eczema, 1)	5	.62	3	2	.....	.....	1
Senile debility	1	12	1	.....	.....	.....	.....
Total	809	.....	374	289	146	20	154
EXTERNAL CAUSES.							
Fractures	31	29.25	26	.....	5	.....	.....
Gunshot wounds	22	20.75	13	.....	9	.....	1
Secondary results of injuries	18	16.98	.....	18	.....	.....	5
Lacerated wounds	11	10.38	8	.....	3	1	.....
Dislocations	10	9.43	7	.....	3	.....	.....
Crushings	4	3.77	3	.....	1	.....	.....
Incised wounds	3	2.83	3	.....	.....	.....	.....
Sprains	2	1.89	2	.....	.....	.....	.....
Muscular strain	1	.94	1	.....	.....	.....	.....
Concussion of the spine	1	.94	1	.....	.....	.....	.....
Contusions	1	.94	1	.....	.....	.....	.....
Punctured wounds	1	.94	1	.....	.....	.....	.....
Sunstroke	1	.94	1	.....	.....	.....	.....
Total	106	.....	67	18	21	1	6
Grand total	915	.....	441	307	167	21	160

SANITATION.

Sanitary conditions at posts are generally good, and improvements are gradually being made. In several instances, however, the prevalence of disease has been attributed to remediable insanitary conditions. This has been notably the case with epidemics of tonsillitis and influenza, which have been reported as due to overcrowding and defective ventilation.

Serious overcrowding has been reported from the recruit depots, Fort Douglas, the military prisons at Fort Leavenworth and Alcatraz Island, and from other places.

Our sick rates for tuberculosis and diseases of the respiratory organs—diseases, the prevalence of which is notably aggravated by overcrowding—are considerably larger than in most European armies. It is believed that a minimum superficial and cubic air space for soldiers in barracks should be adopted and rigidly insisted upon; the increased cost of construction would be compensated for by a diminished sick rate and increased efficiency.

It is understood that in all new construction of barracks the quartermaster's department allows 60 square feet of floor space and 720 cubic feet of air space per man in the dormitories. While this is much more space than is available in most of the older barracks, it is believed that a still more liberal allowance should be made, not less than 85 square feet of floor space and 1,020 cubic feet of air space in the Temperate Zone, and 100 square feet of superficial area and 2,000 cubic feet of air space for the Tropics. The superficial and cubical area and the permissible number of occupants should be marked on the doors of each dormitory.

At some of the older seacoast posts casemate barracks are still in use and are generally reported as insanitary; in fact, it is practically impossible to render such barracks healthful, and they should be abandoned as soon as possible. Some of the posts still using casemate barracks are Forts Wadsworth, Schuyler, Warren, and McHenry.

A decidedly objectionable feature of many of the new barracks is the location of the bathrooms, water-closets, etc., in the basements. These basements are usually dark, damp, and decidedly insanitary. It is now generally conceded by sanitarians that all plumbing fixtures should be open and exposed as freely as possible to light and air. Officers would not bathe nearly so frequently if they had to go down into a dark, damp, and often cold cellar to take a bath, and enlisted men are much the same sort of animal.

In cold climates toilet facilities should be on the same floor as the dormitories and so placed and arranged as to provide an abundance of light and air. With proper plumbing there need be no fear of contamination of the air of the dormitories.

In warm climates all plumbing appliances may well be placed in a separate building. In any case the floor and walls should be of impervious material.

Drainage and sewage at posts have been generally satisfactory. When defects have been reported they were usually of a temporary nature and proper steps had been taken to have them corrected.

At Key West Barracks, Fla., a serious condition of affairs has resulted from a cutting off of the sewer outlet of the post by the fillings made in the construction of a railroad. Suitable recommendations have been made to overcome the difficulty.

At Jackson Barracks, La., the sewer system is also reported as defective. The same condition was reported from Fort Morgan, Ala., where the post was practically destroyed by a storm in September, 1906. It is being rebuilt.

Few defects have been reported regarding the water supply of posts during the year. The surgeon at Fort Morgan noted that the water from the surface wells which furnish a portion of the water supply of the post was salty and not potable.

From Plattsburg Barracks it was reported that the water supply, which is that of the city of Plattsburg, while generally pure, was

liable at times to grave pollution from its watershed. Recommendation was made, and approved by this office, that steps be taken to secure a pure and independent water supply from artesian wells. Nothing has been done along this line so far as known.

In January it was reported that the water supply at Fort Wright, which is that of the city of Spokane and from the Spokane River, was in danger of serious pollution from the increasing population of the watershed. Deep or artesian wells were recommended. Later it was stated that the municipal authorities had taken steps to safeguard the water supply.

With a view of determining the best method of purifying water for troops in the field, 25 Darnall filters and 1 Forbes water sterilizer on wheels have been purchased and will be thoroughly tried out by the troops in this year's maneuvers.

There have been few complaints of the clothing, though criticisms of the shoes issued by the quartermaster's department have come from several posts. Generally, the points criticised are low insteps, inadequate width in proportion to length, insufficient variety of sizes kept in stock for issue by post quartermasters, and lack of care in properly fitting the soldier.

Maj. Edward L. Munson, surgeon at Fort Sheridan, in an exhaustive report on this subject, calls attention to the existence of a "military foot," as distinguished from that of civilians, due to weight carrying and marching. The peculiarities of this foot are increased width and thickness in proportion to length, and he recommends special military lasts based on a series of measurements of the feet of a large number of soldiers. He further recommends that company officers be required to see that the men of their commands are properly fitted before they leave the quartermaster's storehouse. In these recommendations I concur.

Complaints concerning the food supply have generally been of minor and occasional defects of quality, such as will sometimes happen, and have been promptly corrected. Lack of sufficient variety in the soldiers' diet has also been noted. It is believed that the new ration table ordered by the President with its liberal proportions and largely increased number of substitutive articles will remove all causes for complaint.

CAMPS OF INSTRUCTION.

Now that the War Department is acquiring large tracts of land for permanent maneuver camps, it becomes important that the sanitary arrangements should be as perfect as possible. In all of them a piped supply of pure water should be provided as well as a permanent system of sewers.

Had the country possessed such camping grounds for the volunteers of 1898, there is every reason to believe that the great typhoid epidemic of that year would have been prevented, and the camps would soon have demonstrated the wisdom and great economy of such preparations for war.

Unfortunately, in the past officers in authority, assuming that epidemic diseases are inevitable in war, have argued that troops going into camp should, as a part of their training, be subjected to what they call "service conditions;" that is to say, that inasmuch as they can not have piped water, sewers, and screened kitchens and messes

when on the march, they should not have them in camp; that the troops must be "hardened" or "seasoned." No greater mistake could be made. It is well known that a marching command is a healthy one, because it leaves its excreta and wastes behind. It is in camp where these dangerous matters accumulate and epidemics develop, and unless the sanitary conditions there are made as perfect as possible there will be few troops left to march out.

ALASKA.

The average mean strength of the troops serving in Alaska during the year was 847, composed of infantry, signal corps, and hospital corps, all white.

The following table shows the admission, death, and noneffective rates, total and by months, with the prevailing diseases for each month, while the second statement exhibits the total movement of sick by posts:

Ratios per 1,000 of mean strength.

Month.	Mean strength.	All causes.					Exclusive of venereal diseases, alcoholism, and injuries.			Prevailing diseases (exclusive of venereal diseases, etc.).
		Admissions.		Deaths.	Noneffective.		Admissions.	Deaths.	Noneffective.	
		Total.	Hospital.		Total.	Hospital.				
Jan	732	57.38	42.35	1.30	20.40	14.59	39.62	.....	11.06	Acute bronchitis, 7; tonsillitis, pharyngitis, dyspepsia, and muscular rheumatism, 2 each.
Feb	734	76.29	43.60	.....	30.07	23.99	55.86	.....	16.79	Influenza, 12; dyspepsia, 3; muscular rheumatism, 3.
Mar	731	60.19	31.46	.....	26.21	17.43	30.10	.....	11.34	Influenza, 5.
Apr	638	50.16	28.21	.....	25.13	18.18	29.78	.....	12.59	Influenza, 6; dyspepsia, 2; muscular rheumatism, 2.
May	747	66.93	52.21	.....	22.76	20.04	54.89	.....	17.01	Influenza, 20; neuralgia, 3; dyspepsia and furuncle, 2 each.
June	733	61.39	32.74	2.72	25.06	18.78	32.74	1.36	15.01	Dyspepsia, 3; muscular rheumatism, 2.
July	893	50.39	33.59	.....	18.60	12.64	22.40	.....	10.62	Muscular rheumatism, 4; dyspepsia and gastritis, 2 each.
Aug	1,016	62.99	43.31	.....	19.27	15.21	33.46	.....	8.89	Influenza, 7; tonsillitis, 4; muscular rheumatism, 3.
Sept	992	52.42	32.26	.....	25.91	16.94	34.27	.....	10.58	Influenza, 6; tonsillitis, gastritis, and muscular rheumatism, 2 each.
Oct	988	60.73	33.40	.....	21.84	13.55	40.49	.....	11.13	Influenza, 18; muscular rheumatism, 4; constipation, 2.
Nov	981	41.79	25.48	.....	14.92	10.64	24.46	.....	7.00	Muscular rheumatism, 2.
Dec	980	26.53	20.41	.....	10.73	9.08	15.31	.....	4.90	Constipation, 2; abscess, 2.
Total	847	657.62	414.40	3.40	21.22	15.46	404.96	1.13	11.01	Influenza, 74; acute bronchitis, 44; muscular rheumatism, 27; dyspepsia, 16; tonsillitis, 13.

	Mean strength.	Ratios per 1,000 of mean strength.												Average number of days lost.			
		Admissions to sick report.		Discharges on surgeon's certificate of disability.		Deaths.		Total losses.		Noneffective from sickness.							
										From all causes.		Excluding injuries, venereal diseases, and alcoholism.		From all causes.		Excluding injuries, venereal diseases, and alcoholism.	
		From all causes.	Excluding injuries, venereal diseases, and alcoholism.	From all causes.	Excluding injuries, venereal diseases, and alcoholism.	From all causes.	Excluding injuries, venereal diseases, and alcoholism.	From all causes.	Excluding injuries, venereal diseases, and alcoholism.	Total.	In hospital.	Total.	In hospital.	For each soldier.	For each case.	For each soldier.	For each case.
Fort St. Michael	116	344.83	232.76	8.62	8.62	.....	.....	8.62	8.62	8.22	6.68	4.27	3.54	3.00	8.70	1.56	6.70
Fort Liscum	145	427.59	289.66	6.90	6.90	.....	.....	6.90	6.90	16.21	13.85	11.88	10.56	5.92	13.84	4.34	14.98
Fort Gibbon	216	550.93	398.15	18.52	9.26	.....	.....	18.52	9.26	21.27	16.55	14.09	11.24	7.76	14.09	5.14	12.92
Fort Davis	120	675.00	283.33	.....	.....	.....	.....	.....	.....	20.48	14.09	7.37	6.99	7.47	11.07	2.69	9.50
Fort William H. Seward	140	992.86	492.86	14.29	14.29	21.43	7.14	35.72	21.43	23.11	19.61	9.61	8.59	8.44	8.50	3.51	7.12
Fort Egbert	103	1,126.21	825.24	29.13	19.42	.....	.....	29.13	19.42	42.56	22.37	17.77	7.53	15.53	13.79	6.49	7.86

Alaska, always the healthiest station at which American troops are serving, gave lower ratios in 1907 than ever before, the admission, death, and noneffective rates for the year being 657.62, 3.40, and 21.22, as compared with 714.29, 6.46, and 23.87 in 1906. There was only one death from disease, and that was the result of pneumonia.

Influenza and bronchitis caused 30 per cent of the total admissions for disease. There was no case of typhoid fever and only one of malaria. As was the case last year, Fort Egbert had the highest admission and noneffective rates; Fort St. Michael had the lowest.

The highest admission and noneffective rates were noted in February and the lowest in December.

Thirteen enlisted men were invalided home, of whom 8 were returned to duty and 5 discharged for disability.

SANITATION.

There have been no material changes in sanitary conditions during he year.

CUBA.

The average mean enlisted strength of the troops serving in Cuba during the year was 4,436, all white.

The admission rate, 1,164.34, was almost exactly the same as that for 1906, 1,166.52, but the discharge, 17.25, death, 5.46, and constantly noneffective rates, 39.09, were considerably higher than those for 1906. All the general rates were better than those for troops serving in the United States continental.

The death rate for disease, 3.28, is only about three-fourths of that for white troops in the Philippine Islands.

Venereal diseases far surpassed all others as causes of admission, 152.39, and noneffectiveness, 18.66, followed by diarrhea and enteritis, admissions 77.55, malarial fevers, admissions, 51.40, and alcoholism, admissions, 48.92, respectively.

Reference to the following table will show that typhoid and yellow fevers were the chief causes of death from disease.

Deaths among troops serving in Cuba in 1907.

Causes.	Number.	Ratio per 1,000 of—	
		Mean strength.	Total deaths.
DISEASES.			
Typhoid fever	6	1.31	400.00
Yellow fever	5	1.09	333.33
Malarial fever, pernicious	1	.22	66.67
Pyemia	1	.22	66.67
Cerebral meningitis	1	.22	66.67
Pneumonia	1	.22	66.67
Total for disease	15	3.28	1,000.00
EXTERNAL CAUSES.			
Drowning (all accidental)	4	.87	400.00
Gunshot wounds (suicidal, 1; homicidal, 1; accidental, 1)	3	.65	300.00
Fracture of skull (accidental fall)	1	.22	100.00
Crushing (railroad accident)	1	.22	100.00
Poisoning, acute (cardiac paralysis during chloroform anesthesia)	1	.22	100.00
Total for external causes	10	2.18	1,000.00
Grand total	25	5.46	.....

PREVALENCE OF SPECIAL DISEASES.

TYPHOID FEVER.

The admission and death rates for this disease, 9.24 and 1.31, show a marked improvement over the rates for last year, 57.88 and 1.60, but are very much higher than for the United States, continental.

Of the total of 41 cases, 20 occurred in the Fifteenth Cavalry, 9 in Troop M of that regiment, and 4 each in Troops D and K.

The following table shows the distribution of the disease by posts:

Typhoid fever at military stations in Cuba, 1907.

Station.	Admitted.	Days treated.	Constantly sick.	Died.
Ranchuelo	8	441	1.21	.....
Santa Clara	7	567	1.55	3
Camp Columbia	6	920	2.52	.....
Cienfuegos[a]	5	845	2.32	2
Matanzas	5	247	.68	.....
Cardenas	3	99	.27	.....
Guanajay	2	1,163	3.19	1
Pinar del Rio	2	193	.53	.....
Camaguey	1	81	.22	.....
Ciego de Avila	1	56	.15	.....
Holguin	1	86	.24	.....

[a] One officer admitted not included in this table.

UNDETERMINED FEVERS.

The admission rate for this class of diseases, 20.96, is almost five times as great as for the United States. The included diagnoses are shown in the following table:

Febricula	42
Fever, type undetermined	30
Fever, ephemeral	8
Thermic fever	5
Simple continued fever, origin undetermined	3
Remittent fever, not malarial, type undetermined	2
Intermittent fever, undetermined	2
Continued fever of undetermined origin	1
Total	93

MALARIAL FEVERS.

Malarial fevers had an admission rate of 51.40 as compared with 72.13 for last year, and 30.20 for the United States.

DYSENTERY.

The rate for dysentery, 9.24, was about the same as for 1906; amebic and bacillary dysentery were about equally prevalent. The medical returns have always shown far less dysentery among the troops in Cuba than in those serving in the Philippines; indeed, the chief surgeon in Cuba is of the opinion that most of the cases reported from the command there were recurrences of infections contracted in the Philippine Islands.

YELLOW FEVER.

There were 18 cases of this disease, with 5 deaths. Thirteen of the cases occurred at Cienfuegos, 3 at Santa Clara, and 2 at Ciego de Avila. Of the 13 cases at Cienfuegos 9 were in hospital corps men, and 12 were believed to have been contracted in the hospital which was in a part of a building used as a civil hospital; it was thought that an unrecognized mild case occurred in the civil hospital and infected some *stegomyia*, which afterwards gained access to the military section.

DENGUE.

There were 130 cases of dengue as compared with 1 case in 1906; no deaths resulted from this disease. It is of interest to note that although this disease prevailed at a time when yellow fever was existent, and was coincident with that disease at Cienfuegos, that little confusion or doubt in diagnosis arose therefrom.

TUBERCULOSIS AND VENEREAL DISEASES.

The rates for these diseases were slightly lower than in the United States.

DIARRHEA AND ENTERITIS.

These diseases have an admission rate of 77.55, nearly twice as high as for the United States.

INFLUENCE OF STATION.

The following table shows the morbidity and mortality of the different stations:

	Mean strength.	Ratios per 1,000 of mean strength.												Average number of days lost.			
		Admissions to sick report.		Discharges on surgeon's certificate of disability.		Deaths.		Total losses.		Noneffective from sickness.				From all causes.		Excluding injuries, venereal diseases, and alcoholism.	
										From all causes.		Excluding injuries, venereal diseases, and alcoholism.					
		From all causes.	Excluding injuries, venereal diseases, and alcoholism.	From all causes.	Excluding injuries, venereal diseases, and alcoholism.	From all causes.	Excluding injuries, venereal diseases, and alcoholism.	From all causes.	Excluding injuries, venereal diseases, and alcoholism.	Total.	In hospital.	Total.	In hospital.	For each soldier.	For each case.	For each soldier.	For each case.
Camp Columbia (all hospitals)	1.627	807.62	494.16	21.51	17.82	2.46	1.23	23.97	19.05	33.24	27.45	21.07	18.19	12.13	15.02	7.69	15.56
Camaguey	286	1,286.71	839.16	10.49	6.99	.....	.....	10.49	6.99	38.85	34.12	21.79	18.80	14.18	11.02	7.95	9.48
Cienfuegos	283	2,077.74	1,342.76	10.60	7.07	28.27	21.20	38.87	28.27	68.74	49.64	47.69	37.64	25.03	12.07	17.41	12.96
Cardenas	263	904.94	558.94	3.80	3.80	.....	.....	3.80	3.80	24.42	5.49	11.49	3.65	8.91	9.85	4.19	7.50
Pinar del Rio	257	1,319.07	871.60	27.24	15.56	7.78	.....	35.02	7.78	40.40	38.75	23.27	22.57	14.75	11.18	8.49	9.75
Matanzas	256	1,191.41	683.59	7.81	3.91	11.72	7.81	19.53	11.72	29.08	17.35	14.16	9.10	10.61	8.91	5.17	7.56
Santiago	243	1,213.99	781.89	8.23	4.12	.....	.....	8.23	4.12	32.72	29.17	17.67	15.76	11.94	9.84	6.45	8.25
Holguin	233	1,630.90	1,167.38	25.75	21.46	4.29	.....	30.04	4.29	46.96	43.62	32.28	30.81	17.14	10.51	11.78	10.09
Ciego de Avila	231	1,064.94	731.60	17.32	8.66	4.33	4.33	21.65	12.99	22.46	19.13	13.64	11.18	8.20	7.70	4.98	6.80
Guanajay	203	901.48	507.39	4.93	.....	4.93	4.93	9.86	4.93	58.09	53.80	36.67	34.32	21.20	23.52	13.38	26.38
Santa Clara	132	2,833.33	1,636.36	53.03	45.45	30.30	22.73	83.33	68.18	106.56	72.89	59.01	48.46	38.89	13.73	21.54	13.16
Caibarien	106	1,292.45	669.81	28.30	28.30	.....	.....	28.30	28.30	48.20	47.82	21.71	21.43	17.59	13.61	7.92	11.83
Sagua la Grande	102	1,500.00	901.96	9.80	9.80	.....	.....	9.80	9.80	32.39	25.89	17.03	12.22	11.82	7.88	6.22	6.89
Placetas	58	1,206.90	620.69	.....	.....	.....	.....	.....	.....	24.94	15.35	10.25	7.13	9.10	7.54	3.74	6.03
Ranchuelo	40	2,275.00	1,375.00	25.00	.....	.....	.....	25.00	.....	79.73	56.71	52.53	45.48	29.10	12.79	19.17	13.95
Guines	34	1,352.94	617.65	29.41	29.41	29.41	.....	58.82	29.41	30.06	.....	12.97	.....	10.97	8.11	4.74	7.67
Field	82	463.41	231.71	24.39	24.39	.....	.....	24.39	24.39	6.11	.74	1.34	.33	2.23	4.82	.49	2.11
Total	4,436	1,164.34	724.53	17.25	13.10	5.46	3.28	22.71	16.38	39.09	30.99	23.47	19.71	14.27	12.25	8.57	11.82

All the rates were highest at Santa Clara. The lowest admission and death rates were at Camp Columbia and the lowest noneffective rate at Ciego de Avila.

INFLUENCE OF AGE AND LENGTH OF SERVICE.

The following tables show the effects of age and length of service upon morbidity and mortality rates for disease:

Length of service.	Mean strength.	Admitted.	Discharged on surgeon's certificate of disability.	Died.	Constantly noneffective.	Ratios per 1,000 of mean strength.			
						Admitted.	Discharged on surgeon's certificate of disability.	Died.	Constantly noneffective.
Under 1 year	885	895	28	3	32.27	1,011.30	30.63	3.28	36.46
1 to 2 years	688	866	17	3	33.70	1,258.72	23.91	4.22	48.99
2 to 3 years	1,074	863	14	3	32.00	803.54	12.64	2.71	29.80
3 to 4 years	255	218	3	2	9.16	854.90	11.41	7.60	35.95
4 to 5 years	226	198	1	.....	6.93	876.11	4.29	.....	30.67
5 to 10 years	974	779	5	2	25.30	799.79	4.98	1.99	25.97
10 years and over	334	300	4	2	6.37	898.20	11.59	5.80	19.07
Total	4,436	4,119	72	15	145.74	928.54	15.72	3.28	32.85

Age.	Mean strength.	Admitted.	Discharged on surgeon's certificate of disability.	Died.	Constantly noneffective.	Ratios per 1,000 of mean strength.			
						Admitted.	Discharged on surgeon's certificate of disability.	Died.	Constantly noneffective.
19 years and under	90	126	1	1	3.55	1,400.00	10.75	10.75	39.48
20 to 24 years	1,962	2,053	38	8	75.20	1,046.38	18.76	3.95	38.33
25 to 29 years	1,306	1,131	21	3	40.58	866.00	15.58	2.23	31.07
30 to 34 years	589	432	7	.....	15.08	733.45	11.51	.....	25.60
35 to 39 years	283	225	4	1	6.74	795.05	13.70	3.42	23.81
40 to 44 years	121	92	1	2	3.05	760.33	8.00	16.00	25.22
45 to 49 years	70	44	.....	.....	1.16	628.57	.....	.....	16.48
50 years and over	15	16	.....	.....	.39	1,066.67	.....	.....	25.94
Total	4,436	4,119	72	15	145.74	928.54	15.72	3.28	32.85

The admission and noneffective rates were highest for soldiers 19 years and under and lowest for those between 45 and 49 years of age; the death rate was highest for those between 40 and 44 years old, and lowest for those aged 25 to 29 years.

For length of service all the rates, except the death rate, were highest for those in the second year of service; the death rate was highest in those in the fourth year.

INFLUENCE OF SEASON.

The following table shows the movement of sick by months:

Month.	Mean strength.	Ratios per 1,000 of mean strength. All causes. Admissions. Total.	Admissions. Hospital.	Deaths.[a]	Noneffective. Total.	Noneffective. Hospital.	Exclusive of venereal diseases, alcoholism, and injuries. Admissions.	Deaths.	Noneffective.	Prevailing diseases (exclusive of venereal diseases, etc.).
Jan.....	4,914	87.30	55.96	0.78	41.02	32.34	47.62	0.78	23.93	Diarrhea and enteritis, 35; malarial fever and furuncle, 22 each; tonsillitis, 18.
Feb.....	4,982	68.25	38.54	.....	35.63	28.06	42.55	.....	21.64	Diarrhea and enteritis, 21; malarial fever and furuncles, 18 each; tonsillitis and muscular rheumatism, 15 each.
Mar.....	4,963	83.62	41.91	.20	38.87	30.10	44.73	.....	21.59	Diarrhea and enteritis, 25; malarial fever, 22; dyspepsia, 19; furuncle, 16.
Apr.....	4,618	95.28	54.14	.21	38.99	29.23	60.63	.....	21.34	Diarrhea and enteritis, 35; dyspepsia, 26; malarial fever, 24; furuncle, 21.
May....	4,404	114.90	68.12	.....	39.65	30.81	79.25	.....	24.57	Diarrhea and enteritis, 60; dyspepsia, 31; malarial fever, 27; acute bronchitis, 10.
June....	4,142	105.02	62.53	.48	38.35	30.82	68.81	.48	24.25	Diarrhea and enteritis, 55; dyspepsia, 19; malarial fever, 18; coryza, 14; acute bronchitis, 13.
July....	3,942	111.36	65.20	.48	39.61	31.37	74.58	.....	26.10	Diarrhea and enteritis, 38; dyspepsia, 27; malarial fever, 18; acute bronchitis, 17; coryza, 16.
Aug....	3,947	121.61	78.29	.96	44.39	34.98	86.14	.96	29.39	Malarial fever,38; dengue, 37; furuncle, 26; coryza, 23; dyspepsia, 19.
Sept....	4,110	113.38	77.62	.69	39.97	32.17	69.83	.23	24.82	Dengue, 40; furuncle, 24; malarial fever, 19; tonsillitis, 18; acute bronchitis. 14.
Oct.....	4,299	112.82	65.36	.23	38.99	31.33	63.04	.....	22.64	Dengue, 28; abscess, 19; furuncle, 18; acute bronchitis, 13; dyspepsia, 13; diarrhea and enteritis. 13.
Nov.....	4,263	85.15	51.61	.90	36.69	30.06	51.37	.45	21.65	Furuncle, 22; diarrhea and enteritis, 15; abscess, 15; muscular rheumatism, 14; dengue, 13.
Dec.....	4,644	79.03	51.68	.69	36.46	30.39	47.59	.46	20.51	Diarrhea and enteritis, 21; dyspepsia, 16; acute bronchitis, 14.
Total.	4,436	1,164.34	701.08	5.46	39.09	30.99	724.53	3.28	23.47	Diarrhea and enteritis, 344; malarial fever, 228; dyspepsia, 217; dengue, 130; muscular rheumatism, 123; acute bronchitis, 118.

[a] Ratios for deaths based on mean strength "present and absent," total 4,579.

The highest admission and noneffective rates were in August; the highest death rate in November; the lowest admission and noneffective rates were in February; there were no deaths in February or May.

DISCHARGES FOR DISABILITY.

A study of the causes of discharge for disability, as shown in the following tables, discloses the fact that 65 per cent were for causes not in line of duty and of these 50 per cent were contracted before enlistment. The principal causes of discharge were insanity, venereal diseases, and drug habit.

Discharges for disability, year 1907, troops serving in Cuba.

Cause of discharge.	Number of discharges.	Percentage of total discharges.	Discharges for disability.				
			In line of duty.	Not in line of duty.		Discharged for disability before assignment.	
				Contracted before enlistment.	Contracted after enlistment.	In line of duty.	Not in line of duty.
DISEASES.							
General diseases	32	44.44	9	1	22	.....	.....
Venereal diseases	11	15.28	.....	.....	11	.....	.....
Syphilis (secondary)	7	9.72	.....	.....	7	.....	.....
Gonorrhea and results (chronic gonorrhea, 2; gonorrheal rheumatism, 2)	4	5.56	.....	.....	4	.....	.....
Drug habit	11	15.28	.....	1	10	.....	.....
Cocaine	7	9.72	.....	.....	7	.....	.....
Opium	4	5.56	.....	1	3	.....	.....
Tuberculosis (all pulmonary)	7	9.72	7	.....	.....	.....	.....
Hodgkins disease	2	2.78	2	.....	.....	.....	.....
Alcoholism, chronic	1	1.39	.....	.....	1	.....	.....
Diseases of the nervous system	18	25.00	7	8	3	.....	.....
Insanity	12	16.67	6	4	2	.....	.....
Epilepsy	3	4.17	.....	3	.....	.....	.....
Masturbation	2	2.78	.....	1	1	.....	.....
Neurasthenia	1	1.39	1	.....	.....	.....	.....
Diseases of the organs of special sense	5	6.94	3	2	.....	.....	.....
Diseases of the middle and internal ear (all otitis media)	3	4.17	2	1	.....	.....	.....
Diseases of the eye (chronic conjunctivitis, 1; defective vision, 1)	2	2.78	1	1	.....	.....	.....
Diseases of the circulatory system	5	6.94	1	4	.....	.....	.....
Organic disease of the heart	4	5.56	1	3	.....	.....	.....
Chronic cardiac irritability	1	1.39	.....	1	.....	.....	.....
Diseases of the organs of locomotion	4	5.56	3	1	.....	.....	.....
Necrosis of the bone	1	1.39	1	.....	.....	.....	.....
Synovitis, chronic	1	1.39	1	.....	.....	.....	.....
Pes planus, both feet	1	1.39	1	.....	.....	.....	.....
Lumbago, chronic	1	1.39	.....	1	.....	.....	.....
Congenital malformation and arrested development (all deficient mental development)	4	5.56	.....	4	.....	.....	.....
Diseases of the respiratory system	2	2.78	2	.....	.....	.....	.....
Bronchitis, chronic	1	1.39	1	.....	.....	.....	.....
Asthma	1	1.39	1	.....	.....	.....	.....
Diseases of the genito-urinary system	2	2.78	.....	2	.....	.....	.....
Chronic incontinence of urine	1	1.39	.....	1	.....	.....	.....
Enlargement, softening, and tenderness of testicle	1	1.39	.....	1	.....	.....	.....
Total	72	100.00	25	22	25	.....	.....
EXTERNAL CAUSES.							
Secondary results of injuries	2	28.57	.....	2	.....	.....	.....
Fracture	1	14.29	1	.....	.....	.....	.....
Sprain	1	14.29	1	.....	.....	.....	.....
Lacerated wound	1	14.29	1	.....	.....	.....	.....
Crushing of hand	1	14.29	1	.....	.....	.....	.....
Effects of sunstroke	1	14.29	1	.....	.....	.....	.....
Total	7	100.00	5	2	.....	.....	.....
Grand total	79	100.00	30	24	25	.....	.....
Diseases	72	91.14	25	22	25	.....	.....
External causes	7	8.86	5	2	.....	.....	.....

SANITATION.

There have been some complaints of the character of the buildings occupied by troops—overcrowding and deficient light and ventilation mainly. Inasmuch as the occupation of Cuba is only temporary no permanent construction was possible, but such corrections as were practicable were applied.

From one station report was made that the marching shoe was defective owing to poor leather and bad stitching.

PORTO RICO.

There were no changes in the garrison of this island during the year, the only troops serving there being the Porto Rico regiment of native troops with an average mean enlisted strength of 564 men.

The following table shows the movement of sick for the year 1907 as compared with that for 1906:

	Years.	From all causes.		Excluding injuries, venereal diseases, and alcoholism.	
		Total.	In hospital.	Total.	In hospital.
Ratios per 1,000 of mean strength:					
Admissions to sick reports	1906	1,505.51	1,264.71	1,080.88	.....
	1907	1,207.45	1,072.70	886.52	.....
Discharges on surgeon's certificate of disability	1906	10.99	.....	7.33	.....
	1907	7.09	.....	3.55	.....
Deaths	1906	16.48	.....	16.48	.....
	1907	14.18	.....	12.41	.....
Total losses	1906	27.47	.....	23.81	.....
	1907	21.27	.....	15.96	.....
Noneffective from sickness	1906	47.92	40.44	27.03	24.54
	1907	42.38	39.88	26.85	25.46
Average number of days lost:					
For each soldier	1906	17.49	14.76	9.87	8.96
	1907	15.47	14.55	9.80	9.29
For each case	1906	11.62	11.67	9.13	.....
	1907	12.81	12.05	11.05	.....

It will be observed that all the rates are better than for last year; all except the death rate are also better than for any previous year since the statistics for Porto Rican troops have been separately compiled.

The death rate, 14.18, is still abnormally high, more than two and one-half times as great as for American troops serving at home, more than twice as great as for American troops in the Philippine Islands, and nearly three times as great as for Filipino troops serving at home.

As will be seen by reference to the following table, typhoid fever and tuberculosis were the chief causes of death.

Typhoid fever first made its appearance in the Porto Rico regiment in 1906, causing 9 admissions and 2 deaths that year and 14 cases with 3 deaths in 1907.

Eight of the cases occurred at Henry Barracks, Cayey, and 6 at San Juan. At both places the infection was believed to have resulted from using polluted water in the adjacent towns.

The rate for undetermined fevers (24.82) was nearly five times as large as for 1906; the diagnosis in all the cases placed in the "undetermined" list was "febricula."

Cause of death.	Number of deaths.	Ratio per 1,000 of— Mean strength.	Total deaths.
Typhoid fever	3	5.32	375.00
Tuberculosis	2	3.55	250.00
Malarial fever, pernicious	1	1.77	125.00
Pneumonia, lobar, acute	1	1.77	125.00
Gunshot wound of brain (suicidal)	1	1.77	125.00
Total	8	14.18	1,000.00

Malarial fevers gave an admission ratio of 237.59, somewhat less than for 1906.

There were 10 cases of smallpox as against 1 in 1906.

Venereal diseases gave an admission rate of 205.67, a slight improvement over the figures for the previous year.

The following table shows the seasonal prevalence of disease:

Month.	Mean strength.	Ratio per 1,000 of mean strength. All causes. Admissions. Total.	Hospital.	Deaths.	Noneffective. Total.	Hospital.	Exclusive of venereal diseases, alcoholism, and injuries. Admissions.	Deaths.	Noneffective.	Prevailing diseases, (exclusive of venereal diseases, etc.).
Jan.	560	96.43	82.14	.....	57.72	53.69	73.21	.....	36.29	Malaria, 10; typhoid, 6.
Feb.	564	72.70	60.28	.....	45.91	41.92	49.65	.....	28.05	Malaria, 10.
Mar.	563	81.71	63.94	.....	37.24	31.40	51.51	.....	21.37	Malaria, 8.
Apr.	565	134.51	107.96	1.77	41.71	38.53	97.35	1.77	29.68	Malaria, 13; furuncle, 6; typhoid, 4.
May	561	126.56	112.30	1.78	57.50	55.14	94.47	1.78	36.74	Malaria, 13; influenza, 11; furuncle, 6; typhoid, 3.
June	524	78.24	74.43	.....	33.78	31.11	51.53	.....	21.95	Malaria, 5; diarrhea and enteritis, 4; dyspepsia, 3.
July	567	97.00	93.47	1.76	33.97	33.45	68.78	1.76	20.42	Diarrhea and enteritis, 8; malaria, 6; acute bronchitis, 3.
Aug.	572	75.17	69.93	1.75	33.16	32.37	43.71	1.75	12.75	Malaria, 8; diarrhea and enteritis, 3; furuncle, 2.
Sept.	572	92.66	89.16	.....	33.16	32.69	68.18	.....	17.02	Malaria, 15; furuncle, 9; influenza, 6.
Oct.	573	115.18	106.46	.....	38.85	36.99	92.50	.....	30.40	Measles, 12; malaria, 10; influenza, 5.
Nov.	572	134.62	124.13	.....	55.77	54.14	111.89	.....	42.38	Malaria, 16; measles, 14; dyspepsia, 5; influenza, 4.
Dec.	570	101.75	87.72	7.02	40.12	37.18	82.46	5.26	25.52	Malaria, 20; febricula, 11.
Total.	564	1,207.45	1,072.70	14.18	42.38	39.88	886.52	12.41	26.85	Malaria, 134; furuncle, 44; influenza, 35; measles, 26; diarrhea and enteritis, 25; abscess, 25, dyspepsia, 19.

Excluding injuries, venereal diseases, and alcoholism, the highest admission and noneffective rates were attained in November and the lowest in August.

The next table shows the relative prevalence of certain special diseases among Porto Rican and Filipino native troops. The differences are marked and notable.

In this connection it may be stated that no case of beriberi, dengue, or hepatic abscess has ever been reported from the Porto Rican troops.

Disease.	Admission rate per 1,000 of mean strength.	
	Porto Rican troops.	Filipino troops.
Typhoid fever	24.82	1.28
Malaria	237.59	312.67
Smallpox	17.73	.....
Measles	46.10	.43
Influenza	62.06	14.96
Dysentery	5.32	23.94
Beriberi	.....	24.58
Dengue	.....	13.25
Yaws	.....	.64
Tuberculosis, all	7.09	4.92
Syphilis and results	5.32	4.27
Chancroid and results	93.97	7.48
Gonorrhea and results	106.38	51.72
Rheumatism, acute, articular	17.73	3.42
Alcoholism and results	.....	1.28
Insanity	.....	.85
Filariasis	8.87	.....
Bronchitis, acute and chronic	19.50	45.31
Hepatic abscess	.....	.43
Appendicitis	5.32	1.07
Tropical ulcer	.....	10.90
Pemphigus contagiosus	.....	1.71
Dhobie itch	5.32	33.34

RECRUITING.

In the first table it will be seen that about 75 per cent of recruits examined by medical officers were accepted; this proportion is slightly less than that for last year.

TABLE A.

	Number.	Ratio per 1,000 examined.
Examined by medical officers	330	1,000.00
Accepted	247	748.48
By first enlistment	90	272.73
By all other enlistments	157	475.76
Rejected by medical officers	78	236.36
Declined	5	15.15

The next table shows the ages of accepted recruits:

TABLE B.

Age.	Number.	Ratio.	Age.	Number.	Ratio.
18 years and under	.....	.....	31 years	6	24.29
19 years	4	16.19	32 years	5	20.24
20 years	1	4.05	33 years	3	12.15
21 years	38	153.85	34 years	2	8.10
22 years	30	121.46	35 years	1	4.05
23 years	20	80.97	36 years	.....	.....
24 years	22	89.07	37 years	.....	.....
25 years	14	56.68	38 years	1	4.05
26 years	17	68.83	39 years	.....	.....
27 years	24	97.17	40 years and over	1	4.05
28 years	22	89.07			
29 years	22	89.07	Total	247	1,000.00
30 years	14	56.68			

Forty-two and a half per cent were less than 25 years of age; only 5 recruits were under 21 years old.

Table C shows the height of accepted recruits and the relation of age to height:

TABLE C.—*Relation of height to age.*

ABSOLUTE NUMBERS.

Height.	Age.								
	18 years and under.	19 years.	20 years.	21 years.	22 years.	23 years.	24 years.	25 years.	26 years and over.	Total.
5 feet 1 inch and under										
5 feet 2 inches				1						1
5 feet 3 inches				1	1		1		5	8
5 feet 4 inches		2		2	3		1		8	16
5 feet 5 inches				5	4	6	2	4	24	45
5 feet 6 inches		1		10	7	3	8	1	21	51
5 feet 7 inches		1	1	8	9	3	2	3	23	50
5 feet 8 inches				9	4	4	5	1	21	44
5 feet 9 inches				2	1	1	1	3	9	17
5 feet 10 inches					1	2	1	1	2	7
5 feet 11 inches						1		1	5	7
6 feet							1			1
6 feet 1 inch										
6 feet 2 inches and over										
Total		4	1	38	30	20	22	14	118	247

PROPORTIONAL NUMBERS.

5 feet 1 inch and under									
5 feet 2 inches				26.32					4.05
5 feet 3 inches				26.32	33.33		45.45	42.37	32.39
5 feet 4 inches	500.00			52.63	100.00		45.45	67.80	64.78
5 feet 5 inches				131.58	133.33	300.00	90.91	285.71	203.39	182.19
5 feet 6 inches	250.00			263.16	233.33	150.00	363.64	71.43	177.97	206.48
5 feet 7 inches	250.00	1,000.00		210.53	300.00	150.00	90.91	214.29	194.91	202.43
5 feet 8 inches				236.84	133.33	200.00	227.27	71.43	177.97	178.14
5 feet 9 inches				52.63	33.33	50.00	45.45	214.29	76.27	68.83
5 feet 10 inches					33.33	100.00	45.45	71.43	16.95	28.34
5 feet 11 inches						50.00		71.43	42.37	28.34
6 feet							45.45			4.05
6 feet 1 inch										
6 feet 2 inches and over										
Total	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00

Forty-five per cent were 66 inches tall or less, and only 1 recruit reached the height of 6 feet.

In Table D is exhibited the weight of recruits and the relation of weight to age:

TABLE D.– *Relation of weight to age.*

ABSOLUTE NUMBERS.

Weight.	Age.								
	18 years and under.	19 years.	20 years.	21 years.	22 years.	23 years.	24 years.	25 years.	26 years and over.	Total.
119 pounds and under		3		3	3	3	6	2	21	41
120 to 124 pounds		1	1	10	5	6	1	1	16	41
125 to 129 pounds				10	10	3	2	3	18	46
130 to 134 pounds				9	5		5	3	19	41
135 to 139 pounds				2	3	2	2	2	11	22
140 to 144 pounds				3	1	1		1	10	16
145 to 149 pounds					2	3	3		9	17
150 to 154 pounds				1	1	2	2		7	13
155 to 159 pounds							1	1	2	4
160 to 164 pounds									1	1
165 to 169 pounds									1	1
170 to 174 pounds										
175 to 179 pounds									1	1
180 pounds and over								1	2	3
Total		4	1	38	30	20	22	14	118	247

PROPORTIONAL NUMBERS.

119 pounds and under		750.00		78.95	100.00	150.00	272.73	142.86	177.97	165.99
120 to 124 pounds		250.00	1,000.00	263.16	166.67	300.00	45.45	71.43	135.59	165.99
125 to 129 pounds				263.16	333.33	150.00	90.91	214.29	152.54	186.23
130 to 134 pounds				236.84	166.67		227.27	214.29	161.02	165.99
135 to 139 pounds				52.63	100.00	100.00	90.91	142.86	93.22	89.07
140 to 144 pounds				78.95	33.33	50.00		71.43	84.75	64.78
145 to 149 pounds					66.67	150.00	136.36		76.27	68.83
150 to 154 pounds				26.32	33.33	100.00	90.91		59.32	52.63
155 to 159 pounds							45.45	71.43	16.95	16.19
160 to 164 pounds									8.47	4.05
165 to 169 pounds									8.47	4.05
170 to 174 pounds										
175 to 179 pounds									8.47	4.05
180 pounds and over								71.43	16.95	12.15
Total		1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00

Over 50 per cent weighed less than 130 pounds, and only 9.3 per cent weighed 150 pounds or over.

Table E shows chest measurements and their relation to age:

TABLE E.—*Relation of chest measurement to age.*

ABSOLUTE NUMBERS.

Chest measurement.	Age.								
	18 years and under.	19 years.	20 years.	21 years.	22 years.	23 years.	24 years.	25 years.	26 years and over.	Total.
30 inches and under				4	1		1		3	9
31 inches				1	5	5	1		8	20
32 inches		2		17	11	4	4	3	29	70
33 inches		2	1	8	5	3	6	2	31	58
34 inches				3	6	6	6	5	25	51
35 inches				4	2	2		2	13	23
36 inches							1	1	3	5
37 inches							3	1	3	7
38 inches				1					2	3
39 inches and over									1	1
Total		4	1	38	30	20	22	14	118	247

TABLE E.—*Relation of chest measurement to age*—Continued.

PROPORTIONAL NUMBERS.

Chest measurement.	Age.									
	18 years and under.	19 years.	20 years.	21 years.	22 years.	23 years.	24 years.	25 years.	26 years and over.	Total.
30 inches and under				105.26	33.33		45.45		25.42	36.44
31 inches				26.32	166.67	250.00	45.45		67.80	80.97
32 inches		500.00		447.37	366.67	200.00	181.82	214.29	245.76	283.40
33 inches		500.00	1,000.00	210.53	166.67	150.00	272.73	142.86	262.71	234.82
34 inches				78.95	200.00	300.00	272.73	357.14	211.86	206.48
35 inches				105.26	66.67	100.00		142.86	110.17	93.12
36 inches							45.45	71.43	25.42	20.24
37 inches							136.36	71.43	25.42	28.34
38 inches				26.32					16.95	12.15
39 inches and over									8.47	4.05
Total		1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00

Sixty-three and a half per cent of recruits had a chest measurement of 33 inches or under; only about 6½ per cent exceeded 35 inches. The following statement shows the causes of rejection among the candidates examined for enlistment during the year:

TABLE F.

Cause of rejection.	Number rejected.	Ratio per 1,000.
1. Underweight	21	269.23
2. Defects of vision	8	102.56
3. Venereal diseases	7	89.74
4. Diseases of the skin	6	76.92
5. Heart disease	5	64.10
6. Defective teeth	5	64.10
7. General diseases, except as shown in detail	3	38.46
8. Defects of hearing	3	38.46
9. Chest development insufficient	3	38.46
10. Diseases of the ear, except defects of hearing	2	25.64
11. Varicocele	2	25.64
12. Tuberculosis	2	25.64
13. Diseases of the respiratory system	2	25.64
14. Diseases of the genito-urinary system (nonvenereal)	2	25.64
15. Flat feet	2	25.64
16. Alcoholism	1	12.82
17. Varicose veins	1	12.82
18. Hemorrhoids	1	12.82
19. Hernia	1	12.82
20. Injuries	1	12.82
Total	78	1,000.00

It will be noted that the most important cause of rejection was a deficiency in weight, nearly 27 per cent of the total rejections having been due to that cause; the same defect only caused 4 per cent of the rejections of American candidates for enlistment. Defects of vision, venereal diseases, and heart disease caused about the same percentage of rejections as for American recruits, but alcoholism, which caused 7½ per cent of the rejections of American recruits, does not appear as a factor among the Porto Rican candidates.

HAWAII.

There has been during the year but one garrison of four companies of infantry in the islands. Camp McKinley was abandoned in June, the command moving to Fort Shafter.

The average enlisted strength was 192. The admission, discharge for disability, and constantly noneffective rates were 963.54, 10.42, and 35.42, compared with 1,008.62, 20.16, and 49.93 for 1906; there were no deaths.

There were no admissions for typhoid or malarial fever or dysentery.

The admission rates for venereal diseases, 223.96, and alcoholism, 67.71, are much higher than for any other country where United States troops are serving; these two causes of morbidity account for over one-third of all the admissions for disease.

Four enlisted men were invalided home during the year, of whom two were subsequently returned to duty and two were remaining at the end of the year.

HEALTH OF TROOPS IN THE PHILIPPINE ISLANDS.

AMERICAN TROOPS.

All the rates for 1907 are much better than for 1906—indeed better than for any year since the occupation of these islands.

The mean strength of the command was 11,699.

The admission rate from all causes was 1,483.92 as compared with 1,700.32 for 1906; for disease, 1,260.11 as against 1,494.43 the preceding year. The discharge for disability rate was 8.54 in 1907 and 11.33 in 1906; the death rate was 6.92 in 1907 as against 9.11 in 1906; the constantly noneffective rate was reduced from 63.35 in 1906 to 55.49 in 1907, and the invaliding home rate from 29.08 in 1906 to 23.76 in 1907.

The principal factor in the improved rates of sickness and mortality was the marked fall in the rates for malaria, dengue, the eruptive fevers, diarrheal diseases, and diseases of the skin. These figures and facts are exceedingly gratifying as proving that great attention is being paid to preventive medicine with the results which always follow such attention.

Contrary to the experience in 1906, when all the rates, except admission, were lower for colored troops than for white troops, in 1907 all the rates, except that for discharge for disability, were higher for colored troops.

For diseases the principal causes of admission, in the order of importance, were venereal, malarial, diarrhea and enteritis, dengue, and dysentery, these five groups alone accounting for over 50 per cent of all admissions.

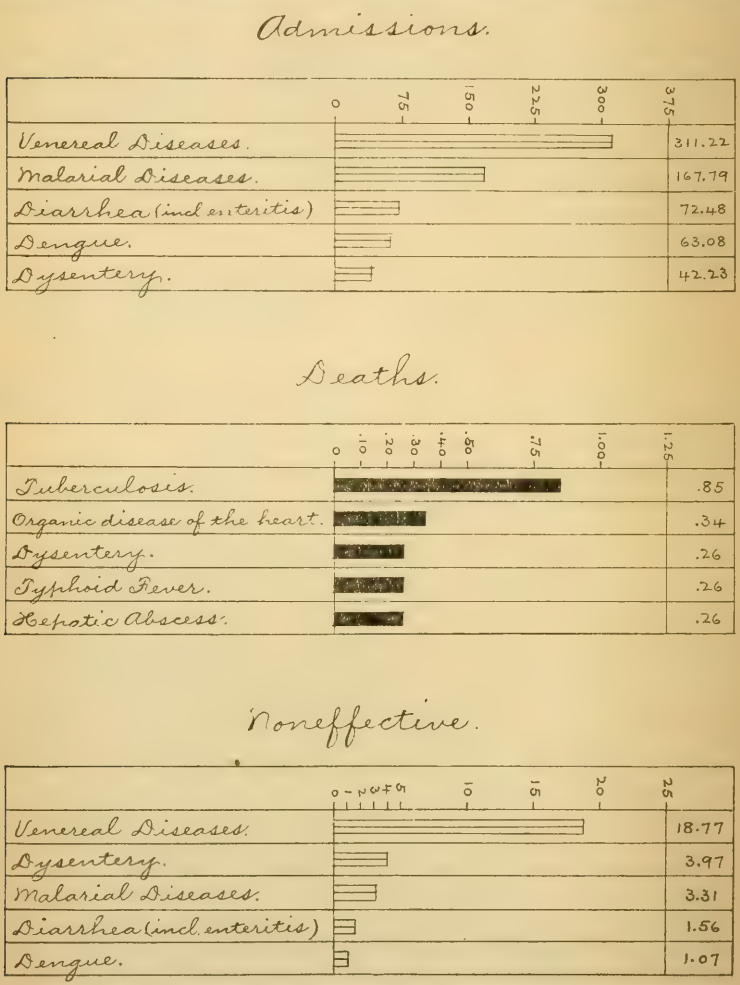
The principal causes of death in the order of relative importance were tuberculosis, which alone caused 20 per cent of all deaths from disease; organic heart disease, typhoid fever, dysentery, pneumonia, syphilis, and liver abscesses; these seven diseases having caused nearly three-fifths of all deaths.

Tuberculosis was the cause of one-third of all the discharges for disease, and insanity accounts for another one-eighth.

There were 2 admissions for sunstroke and 1 for snake bite without fatalities; 15 deaths occurred from drowning; 1 enlisted man was wounded in action and recovered; none were killed.

There were 2 cases of homicide, 7 of suicide, and 1 judicial execution.

Chart showing the relative admission, death, and noneffective rates per thousand of mean strength for certain special diseases in the Philippine Islands (American troops).



PREVALENCE OF SPECIAL DISEASES.

TYPHOID FEVER.

The admission rate for this disease, 3.50, was slightly less than for last year, but there were 3 deaths, as against none for 1906. A serious outbreak occurred in Company I, First Infantry, at Dagami, Leyte, in the spring of 1907. In a total strength of 50 men there were 13 cases, with 1 death. All of these cases were admitted to

hospital within a period of eight days and seemed to have contracted their infection about the same time. These circumstances would indicate that water was the probable source of the infection, and this view is supported by the fact that unsterilized water was known to have been used for a period of several days within the incubation period of the cases; also that the water was taken from a stream passing through a native village, and in which natives were standing and washing their clothes just above the place where the water was taken.

The Manila posts gave 7 admissions; the other posts infected were with few exceptions the same as last year.

UNDETERMINED FEVERS.

The admission rate for these fevers increased from 8.97 in 1906 to 15.73 in 1907; there were no fatalities.

The class of fevers which have been consolidated under this head are shown in the following table:

Febricula	113
Fever, type undetermined	29
Thermic fever	13
Simple continued fever, origin undetermined	8
Fever, ephemeral	6
Fever, epidemic, type and nature unknown, contagious	6
Simple fever	5
Fever, double continued	2
Remittent fever, not malarial, type undetermined	1
Irregular fever, continued	1
Total	184

MALARIA.

The admission rate for malarial diseases, 167.79, is little more than half that for the preceding year; there were only 2 deaths from this cause. The number of infections of which the type was undetermined was only 50, as compared with 189 in 1906 and 1,885 in 1905.

ASIATIC CHOLERA.

There were 2 cases with 1 death.

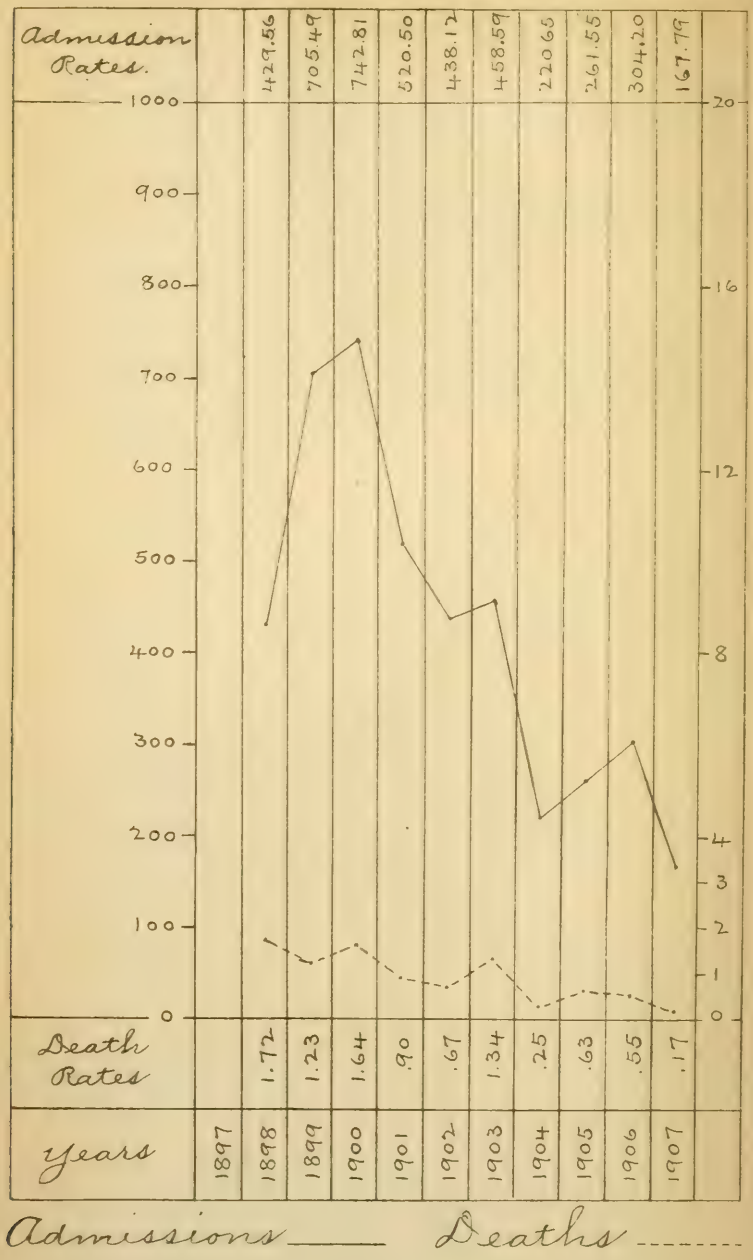
DYSENTERY.

The admission rate for this disease, 42.23, was about the same as last year; the proportion of amebic to bacillary infections was 17 to 1.

DENGUE.

There were 738 admissions for dengue, as compared with 1,099 in 1906. A board of medical officers, which was convened at Fort William McKinley, P. I., to study this disease in the spring of 1908, concluded that it was not contagious, that it was transmitted by mosquitoes, and strongly recommended the usual antimosquito measures, such as screening, the use of mosquito bars, drainage, etc., as measures of prevention.

Chart showing the relative admission and death rates per thousand of mean strength for malarial diseases in the Philippine Islands, by years (American troops).



BERIBERI.

This disease caused 1 admission and 1 death.

YAWS.

Two cases of yaws were admitted.

TUBERCULOSIS.

The admission rate for all forms of tuberculosis was 6.84; last year it was 5.49.

VENEREAL DISEASES.

The admission rate, 311.22, was slightly higher than for 1906.

ALCOHOLISM.

The ratios were about the same as those for 1906.

INSANITY.

The admission rate for insanity was 1.88; for 1906 it was 2.02.

PNEUMONIA.

There was a marked increase in the admission rate for this disease, from 0.48 in 1906 to 1.97 in 1907.

DIARRHEA AND ENTERITIS.

These diseases, with an admission rate of 72.43, show a decided improvement as compared with the rate of 130.69 in 1906.

INFLUENCE OF STATION.

The Department of Luzon had the highest admission rate and the Department of Mindanao the lowest; the Department of the Visayas had the highest death and noneffective rates and the Department of Mindanao the lowest.

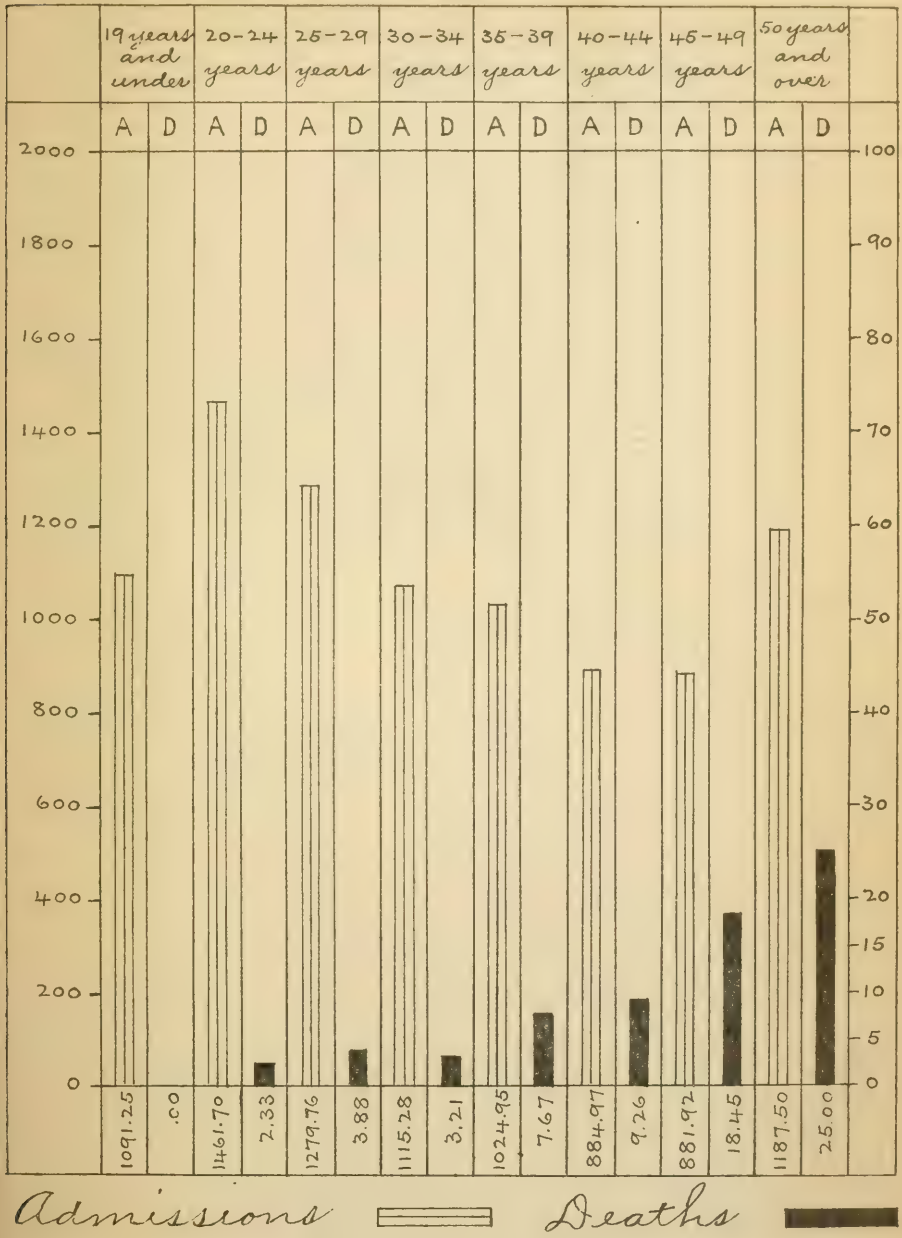
Of the individual islands Guimaras had the highest admission and noneffective rates and Leyte the highest death rate. Mindanao had the lowest death and noneffective rates and Panay the lowest admission rate.

Of the posts in the Philippines those in Manila had the lowest admission and death rates; the highest admission rate occurred at Camp Downes, Leyte, and the highest death rate at Camp Bumpus, Leyte.

Movement of sick by islands and departments.

Department and island.	Ratios per 1,000 of mean strength.												Average number of days lost.			
		Admissions to sick report.		Discharges on surgeon's certificate of disability.		Deaths.		Total losses.		Noneffective from sickness.				From all causes.		Excluding injuries, venereal diseases, and alcoholism.	
										From all causes.		Excluding injuries, venereal diseases, and alcoholism.					
	Mean strength.	From all causes.	Excluding injuries, venereal diseases, and alcoholism.	From all causes.	Excluding injuries, venereal diseases, and alcoholism.	From all causes.	Excluding injuries, venereal diseases, and alcoholism.	From all causes.	Excluding injuries, venereal diseases, and alcoholism.	Total.	In hospital.	Total.	In hospital.	For each soldier.	For each case.	For each soldier.	For each case.
Department of Luzon	5,586	1,583.60	983.35	7.52	5.91	5.55	2.69	13.07	8.60	47.99	39.73	25.73	21.63	17.52	11.06	9.39	9.55
Department of Visayas	2,514	1,576.37	1,021.88	15.91	14.32	9.94	5.97	25.85	20.29	56.86	50.20	32.98	28.76	20.75	13.17	12.04	11.78
Samar Island	750	1,308.00	900.00	28.00	25.33	5.33	2.67	33.33	28.00	45.35	40.56	27.82	24.83	16.55	12.65	10.16	11.28
Leyte Island	767	1,743.16	1,112.13	7.82	7.82	13.04	7.82	20.86	15.64	55.21	41.93	32.80	24.32	20.15	11.56	11.97	10.77
Guimaras Island	570	1,935.09	1,292.08	7.02	5.26	12.28	10.53	19.30	15.79	73.04	70.66	43.60	41.80	26.66	13.78	15.91	12.31
Cebu Island	237	1,388.19	755.27	21.10	16.88	8.44	4.22	29.54	21.10	62.62	61.26	25.86	25.07	22.86	16.47	9.44	12.50
Panay Island	190	1,121.05	657.89	21.05	.....	10.53	.....	31.58	.....	53.25	46.43	31.07	27.67	19.44	17.34	11.34	17.24
Department of Mindanao	3,479	1,252.66	734.98	4.89	3.45	4.02	2.59	8.91	6.04	45.38	42.48	20.74	19.43	16.56	13.22	7.57	10.30
Mindanao Island	2,539	1,779.99	657.35	3.94	2.36	4.33	2.76	8.27	5.12	43.51	40.18	19.88	18.35	15.88	13.46	7.25	11.04
Jolo Island	940	1,448.94	944.68	7.45	6.38	3.19	2.13	10.64	8.51	50.43	48.68	23.07	22.34	18.41	12.71	8.42	8.91

Chart showing by ages the relative admission and death rates for disease per thousand of mean strength in the Philippine Islands (American troops).



INFLUENCE OF SEASON.

Exclusive of injuries, venereal diseases, and alcoholism, which are not influenced by season, the highest admission and noneffective rates occurred in October and the lowest in February; the highest death rate in April and the lowest in August.

INFLUENCE OF AGE.

As is usually the case, the highest admission and noneffective rates and the lowest death rates were noted in soldiers under 25 years of age, while the lowest admission and noneffective rates and the highest death rates occurred among soldiers more than 45 years old.

INFLUENCE OF LENGTH OF SERVICE.

The highest admission and noneffective rates and the lowest death rates occurred among soldiers in their first enlistment; the lowest admission and noneffective rates were noted for soldiers in their second enlistment, and the lowest death rate in those of over ten years' service.

The following statement shows the causes of discharge for disability among troops serving in the Philippine Islands.[a] Of the total number discharged, in 22 per cent the causes were not contracted in line of duty.

Discharges for disability, year 1907, troops serving in the Philippine Islands.

Cause of discharge.	Number of discharges.	Percentage of total discharges.	Discharges for disability.				
			In line of duty.	Not in line of duty.		Discharged for disability before assignment.	
				Contracted before enlistment.	Contracted after enlistment.	In line of duty.	Not in line of duty.
DISEASES.							
General diseases	38	43.68	31	.....	7	.....	.....
Tuberculosis (pulmonary, 23; of the other organs, 3)	26	29.89	26	.....	.....	.....	.....
Venereal diseases	4	4.60	.....	.....	4	.....	.....
Syphilis (secondary)	1	1.15	.....	.....	1	.....	.....
Gonorrhea (chronic gonorrhea, 1; gonorrheal ophthalmia, 1; gonorrheal arthritis, 1)	3	3.45	.....	.....	3	.....	.....
Rheumatism, articular, chronic	4	4.60	4	.....	.....	.....	.....
Alcoholism, chronic	2	2.30	.....	.....	2	.....	.....
Dysentery, catarrhal, chronic	1	1.15	1	.....	.....	.....	.....
Drug habit (morphinism)	1	1.15	.....	.....	1	.....	.....
Diseases of the nervous system	16	18.39	10	4	2	.....	.....
Insanity	11	12.64	9	2	.....	.....	.....
Neuritis, chronic	2	2.30	.....	.....	2	.....	.....
Thrombosis, cerebral	1	1.15	1	.....	.....	.....	.....
Hemiplegia, chronic	1	1.15	.....	1	.....	.....	.....
Epilepsy	1	1.15	.....	1	.....	.....	.....
Diseases of the organs of special sense	11	12.64	7	4	.....	.....	.....
Otitis media, chronic	3	3.45	2	1	.....	.....	.....
Astigmatism	2	2.30	.....	2	.....	.....	.....
Other diseases of the eye (atrophy of the optic nerve, 1; chronic hyalitis, 1	2	2.30	2	.....	.....	.....	.....
Trachoma	1	1.15	.....	1	.....	.....	.....
Disease of the choroid	1	1.15	1	.....	.....	.....	.....
Retinitis, chronic	1	1.15	1	.....	.....	.....	.....
Amblyopia	1	1.15	1	.....	.....	.....	.....

[a] These soldiers were all discharged in the United States.

Discharges for disability, year 1907, troops serving in the Philippine Islands—Continued.

Cause of discharge.	Number of discharges.	Percentage of total discharges.	Discharges for disability.				
			In line of duty.	Not in line of duty.		Discharged for disability before assignment.	
				Contracted before enlistment.	Contracted after enlistment.	In line of duty.	Not in line of duty.
DISEASES—continued.							
Diseases of the circulatory system	7	8.05	7				
Organic disease of the heart	4	4.60	4				
Arterio-sclerosis	1	1.15	1				
Varicose veins	1	1.15	1				
Phlebitis, chronic	1	1.15	1				
Diseases of the digestive system	5	5.75	5				
Gastric ulcer, chronic	2	2.30	2				
Gastritis, chronic	1	1.15	1				
Sprue	1	1.15	1				
Cholelithiasis, chronic	1	1.15	1				
Diseases of the respiratory system	4	4.60	3	1			
Asthma	2	2.30	1	1			
Ethmoiditis, chronic	1	1.15	1				
Pleural adhesions, chronic	1	1.15	1				
Diseases of the organs of locomotion	2	2.30	1	1			
Ankylosis shoulder joint	1	1.15	1				
Bunions	1	1.15		1			
Congenital malformation and arrested development (hallux valgus, 1; imbecility congenital, 1)	2	2.30		2			
Diseases of the genito-urinary system	1	1.15	1				
Nephritis, chronic	1	1.15	1				
Diseases of the skin and cellular tissue	1	1.15	1				
Gangrene	1	1.15	1				
Total	87	100.00	66	12	9		
EXTERNAL CAUSES.							
Gunshot wounds	5	38.46	5				
Fractures, not gunshot (of skull, 1; of other bones, 3)	4	30.77	3		1		
Dislocations	2	15.38	2				
Contusion	1	7.69	1				
Concussion of the brain	1	7.69	1				
Total	13	100.00	12		1		
Grand total	100	100.00	78	12	10		
Diseases	87	87.00	66	12	9		
External causes	13	13.00	12		1		

INVALIDED HOME.

The number of enlisted men invalided home from the Philippine Islands in 1907 was 278, giving an invaliding ratio of 23.76, which was considerably less than that for 1906.

Tuberculosis alone caused over 25 per cent of the total invaliding, while dysentery was the next most potent factor, with a percentage of 11.87.

The percentage of deaths and discharges, 3.24 and 25.90 was somewhat less than last year.

Cause.	Number of cases.	Percentage of total cases.	Duty.	Discharged on surgeon's certificate of ability.	Died.	Otherwise disposed of.	Remaining at end of year.
Tuberculosis	71	25.54	3	13	7	5	43
Dysentery	33	11.87	18			7	8
Insanity	16	5.76		12		1	3
Sprue	16	5.76	8		1	3	4
Venereal diseases	15	5.40	3	6		1	5
Organic disease of the heart	11	3.96	2	5			4
Neurasthenia	8	2.88	3	1		2	2
Gunshot wounds	7	2.52	2	3			2
Diseases of the middle and internal ear	6	2.16	1	5			
Functional disease of the heart	5	1.80	3			2	
Asthma	5	1.80	3	2			
Secondary results of injuries	5	1.80					5
Malarial fever	4	1.44	2				2
Congenital malformation and arrested development	4	1.44	1	2			1
Under observation and undiagnosed	4	1.44	4				
Neuritis	3	1.08		1		1	1
Errors of refraction	3	1.08	1	1			1
Diseases of the eye not mentioned in detail	3	1.08		2			1
Varicose veins	3	1.08	1	1		1	
Dyspepsia	3	1.08	1				2
Diarrheal diseases, including enteritis	3	1.08	2				1
Hepatic abscess	3	1.08	1			1	1
Acute abscess, phlegmon	3	1.08	1	1		1	
Fractures (other than skull)	3	1.08	1	2			
Melancholia	2	.72				1	1
Diseases of the nasal fossæ not mentioned in detail	2	.72		1		1	
Chronic bronchitis	2	.72					2
Gastritis	2	.72	1				1
Nontubercular diseases of the bones not mentioned in detail	2	.72				1	1
Muscular rheumatism	2	.72	1				1
Typhoid fever	1	.36	1				
Diphtheria	1	.36					1
Cancer	1	.36					1
Rheumatism, chronic articular	1	.36		1			
Exophthalmic goiter	1	.36					1
Anæmia	1	.36					1
Narcotic poisoning, chronic	1	.36		1			
Disease of the spinal cord not mentioned in detail	1	.36					1
Cerebral thrombosis	1	.36		1			
Epilepsy	1	.36					1
Choroid, diseases of	1	.36		1			
Iritis	1	.36					1
Aneurism	1	.36			1		
Phlebitis	1	.36		1			
Chronic nasal catarrh	1	.36		1			
Constipation	1	.36					1
Fistula	1	.36	1				
Cirrhosis of the liver	1	.36					1
Nephritis, chronic	1	.36		1			
Diseases of the bladder	1	.36				1	
Osteo-myelitis	1	.36					1
Bunion	1	.36		1			
Bursitis	1	.36		1			
Ankylosis, shoulder joint	1	.36		1			
Disease of the joints not mentioned in detail	1	.36	1	1			
Fracture of the skull	1	.36	1				
Dislocation	1	.36		1			
Concussion of the brain	1	.36		1			
Contusion	1	.36		1			
Total cases	278		66	72	9	29	102
Percentage of total dispositions	100.00	100.00	23.74	25.90	3.24	10.43	36.69

FILIPINO TROOPS.

The following table shows the movement of sick for the year:

	From all causes.		Excluding injuries, venereal diseases, and alcoholism.	
	Total.	In hospital.	Total.	In hospital.
Ratios per 1,000 of mean strength:				
Admissions to sick report	1,114.55	818.55	916.01	.....
Discharges on surgeon's certificate of disability	8.55	.....	8.34	.....
Deaths	5.77	.....	5.13	.....
Total losses	14.32	.....	13.47	.....
Noneffective from sickness	28.57	23.47	22.23	18.41
Average number of days lost:				
For each soldier	10.43	8.57	8.11	6.72
For each case	9.36	10.47	8.86	.....

All the rates are considerably lower than for last year, and lower than for any year since these troops were organized; the death rate is just one-half of that for 1906. All the rates, except the death rate, are also lower than for American troops serving at home; the death rate is a fraction higher; the discharge for disability rate is about one-third of that for American troops, and the constantly noneffective rate, little more than one-half.

For disease the principal causes of admissions, in order of their importance, were malaria 312.67, venereal 63.48, diarrhea and enteritis 54.07, bronchitis 45.31, and dhobie itch 33.34; the reduction in the general admission rate was due to the great diminution in the number of cases of malaria, diarrhea, bronchitis and beriberi.

The causes of death are shown in the following table:

Cause of death.	Number ratio per 1,000 of—		
	Of deaths.	Mean strength.	Total deaths.
DISEASES.			
Tuberculosis (pulmonary, 4; tubercular peritonitis, 1; general miliary tuberculosis, 1)	6	1.28	250.00
Beriberi	6	1.28	250.00
Dysentery (amebic, 1; bacillary, 1; acute catarrhal, 1)	3	.64	125.00
Malarial fevers (remittent, malignant)	2	.43	83.33
Cholera, Asiatica	2	.43	83.33
Meningitis, cerebral	1	.21	41.67
Cardiac dilatation	1	.21	41.67
Pleurisy, purulent	1	.21	41.67
Cirrhosis of the liver, atrophic	1	.21	41.67
Toxemia (due to suppurative adenitis of deep cervical glands extending to mediastinal and bronchial glands)	1	.21	41.67
Total	24	5.13	1000.00
EXTERNAL CAUSES.			
Drowning (accidental)	2	.43	666.67
Gunshot wounds (accidental)	1	.21	333.33
Total	3	.64	1000.00
Total for diseases and external causes	27	5.77	.....

The greatest improvement is shown by beriberi, malarial fevers, and cholera, which in 1906 caused 9, 6, and 8 deaths, respectively.

The next table shows all discharges for disability:

Cause of discharge.	Number of cases.	Percentage of total discharges.	In line of duty.	Not in line of duty.		Discharges for disability before assignment.	
				Contracted before enlistment.	Contracted after enlistment.	In line of duty.	Not in line of duty.
DISEASES.							
Tuberculosis, pulmonary	21	53.85	21				
Beriberi	3	7.69	3				
Melancholia, chronic	3	7.69	3				
Insanity	2	5.13	1	1			
Chronic otitis media	2	5.13	2				
Dysentery, amebic, chronic	1	2.56	1				
Leprosy	1	2.56	1				
Epilepsy	1	2.56		1			
Amblyopia, both eyes	1	2.56	1				
Valvular disease of the heart	1	2.56	1				
Bronchitis, chronic	1	2.56	1				
Asthma, bronchial, recurrent	1	2.56	1				
Parenchymatous nephritis, chronic	1	2.56	1				
Total	39	100.00	37	2			
EXTERNAL CAUSES.							
Gunshot wound, received in action	1	100.00	1				

The influence of season is shown in the next table:

Month.	Ratios per 1,000 of mean strength.									Prevailing diseases (exclusive of venereal diseases, etc.).
	All causes.						Exclusive of venereal diseases, alcoholism, and external causes.			
	Mean strength.	Admissions.			Noneffective.		Admissions.	Deaths.	Noneffective.	
		Total.	Hospital.	Deaths.	Total.	Hospital.				
Jan.	4,565	106.90	76.01	0.88	32.11	24.19	90.47	0.44	25.66	Malaria, 131; influenza, 45; bronchitis, 24.
Feb.	4,562	87.24	58.75	.66	29.84	22.79	71.02	.66	23.75	Malaria, 111; diarrhea, 23; constipation, 16; beriberi, 15.
Mar.	5,008	82.87	59.31	.20	27.94	23.64	70.89	.20	22.54	Malaria, 114; diarrhea, 27; furuncle, 21.
Apr.	4,879	106.17	80.14	.41	31.85	25.34	88.95	.41	25.76	Malaria, 160; diarrhea, 23; muscular rheumatism, 20.
May	4,573	102.12	72.38	.22	31.80	25.73	87.69		25.16	Malaria, 146; diarrhea, 26; beriberi, 17; bronchitis, 17.
June	4,656	109.11	79.68	1.72	32.16	27.08	93.00	1.72	26.97	Malaria, 135; muscular rheumatism, 23; bronchitis, 21.
July	4,850	101.44	78.56	.41	29.41	25.13	85.15	.41	23.49	Malaria, 158; diarrhea, 36; furuncle, 23.
Aug.	4,953	106.00	75.31		28.58	23.68	85.60		22.08	Malaria, 156; bronchitis, 24; diarrhea, 20.
Sept.	4,886	90.67	66.72	.41	29.63	24.53	70.00	.41	21.87	Malaria, 117; diarrhea, 21; furuncle, 16.
Oct.	4,613	79.34	61.35	.22	24.60	20.33	62.87	.22	17.79	Malaria, 94; bronchitis, 28; diarrhea, 19.
Nov.	4,149	65.56	51.34	.24	23.53	20.63	50.13	.24	16.50	Malaria, 63; constipation, 14; beriberi, 12; diarrhea, 12.
Dec.	4,450	72.58	55.96	.45	20.57	17.79	55.96	.45	14.28	Malaria, 78; constipation, 22; furuncle, 13.
Total.	4,679	1,114.55	818.55	5.77	28.57	23.47	916.01	5.13	22.23	Malaria, 1,463; diarrhea, 253; bronchitis, 211.

Excluding injuries, venereal diseases, and alcoholism, which were practically independent of seasonal influences, the highest admission, death, and noneffective rates are recorded in June, the lowest admission rate in November, and the lowest noneffective rate in December. There were no deaths in May and August.

RECRUITING.

The following tables show the results obtained in the examination of applicants for enlistment in the Philippine Islands:

TABLE A.—*Examination of Filipino applicants for enlistment during 1907.*

	Number.	Ratio per 1,000 examined.
Examined by medical officers	2,981	1,000.00
Accepted by medical officers	2,685	900.70
By first enlistment	975	327.07
Other enlistments	1,710	573.63
Rejected by medical officers	254	85.21
Declined	42	14.09

The number of applicants examined was about five times as great as in the previous year, but the percentage accepted was about the same, considerably higher than for American or Porto Rican troops. Table B shows the ages of accepted recruits:

TABLE B.—*Filipino recruits (accepted).*

Age.	Number.	Ratio.
18 years and under	8	2.98
19 years	8	2.98
20 years	26	9.68
21 years	352	131.10
22 years	205	76.35
23 years	129	48.04
24 years	396	147.49
25 years	341	127.00
26 years	247	91.99
27 years	247	91.99
28 years	162	60.34
29 years	133	49.53
30 years	78	29.05
31 years	110	40.97
32 years	50	18.62
33 years	42	15.64
34 years	41	15.27
35 years	32	11.92
36 years	22	8.19
37 years	11	4.10
38 years	12	4.47
39 years	6	2.23
40 years and over	27	10.06
Total	2,685	1,000.00

Fifty-five per cent were 25 years of age or under.

The next table shows the height of recruits and the relation of age to height:

TABLE C.—*Relation of height to age.*

ABSOLUTE NUMBERS.

Height.	Age.									Total.
	18 years and under.	19 years.	20 years.	21 years.	22 years.	23 years.	24 years.	25 years.	26 years and over.	
4 feet 10 inches and under	1			5	2	1	2	2	7	20
4 feet 11 inches									1	1
5 feet	1		2	11	10	5	10	9	43	91
5 feet 1 inch		1	1	39	15	7	31	33	114	241
5 feet 2 inches	2	2	3	65	35	21	44	48	167	387
5 feet 3 inches	1	2	7	63	41	19	79	64	223	499
5 feet 4 inches		1	8	78	50	27	78	66	251	559
5 feet 5 inches	3		4	44	24	22	69	59	180	405
5 feet 6 inches		2		29	16	16	48	30	131	272
5 feet 7 inches				10	7	4	20	22	51	114
5 feet 8 inches				4	4	5	10	4	33	60
5 feet 9 inches				2	1	1	5	3	14	26
5 feet 10 inches			1	1		1			2	5
5 feet 11 inches and over				1				1	3	5
Total	8	8	26	352	205	129	396	341	1,220	2,685

PROPORTIONAL NUMBERS.

4 feet 10 inches and under	125.00			14.20	9.76	7.75	5.05	5.87	5.74	7.45
4 feet 11 inches									.82	.37
5 feet	125.00		76.92	31.25	48.78	38.76	25.25	26.39	35.25	33.89
5 feet 1 inch		125.00	38.46	110.80	73.17	54.26	78.28	96.77	93.44	89.76
5 feet 2 inches	250.00	250.00	115.38	184.66	170.73	162.79	111.11	140.76	136.89	144.13
5 feet 3 inches	125.00	250.00	269.23	178.98	200.00	147.29	199.49	187.68	182.79	185.85
5 feet 4 inches		125.00	307.69	221.59	243.90	209.30	196.97	193.55	205.74	208.19
5 feet 5 inches	375.00		153.85	125.00	117.07	170.54	174.24	173.02	147.54	150.84
5 feet 6 inches		250.00		82.39	78.05	124.03	121.21	87.98	107.38	101.30
5 feet 7 inches				28.41	34.15	31.01	50.51	64.52	41.80	42.46
5 feet 8 inches				11.36	19.51	38.76	25.25	11.73	27.05	22.35
5 feet 9 inches				5.68	4.88	7.75	12.63	8.80	11.48	9.68
5 feet 10 inches			38.46	2.84		7.75			1.64	1.86
5 feet 11 inches and over				2.84				2.93	2.46	1.86
Total	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00

Of recruits 64 inches in height or less, there were 67 per cent.

Table D exhibits the weights of recruits and the relation of weight to age:

TABLE D.—*Relation of weight to age.*

ABSOLUTE NUMBERS.

Weight.	Age. 18 years and under.	19 years.	20 years.	21 years.	22 years.	23 years.	24 years.	25 years.	26 years and over.	Total.
99 pounds and under		1		5	4	4	3	3	30	50
100 to 104 pounds	1			27	14	7	16	16	67	148
105 to 109 pounds	1		5	36	24	13	27	26	100	232
110 to 114 pounds	3	4	6	68	50	22	62	46	185	446
115 to 119 pounds	2		4	98	43	36	82	80	252	597
120 to 124 pounds		1	2	54	20	22	64	60	174	397
125 to 129 pounds		2	6	29	21	12	50	48	153	321
130 to 134 pounds			3	17	17	4	45	26	109	221
135 to 139 pounds	1			11	8	7	25	18	77	147
140 to 144 pounds				5	2	1	14	12	41	75
145 to 149 pounds				1			5	3	13	22
150 to 154 pounds				1			2	1	11	15
155 to 159 pounds								1	3	4
160 pounds and over					2	1	1	1	5	10
Total	8	8	26	352	205	129	396	341	1,220	2,685

PROPORTIONAL NUMBERS.

99 pounds and under		125.00		14.20	19.51	31.01	7.58	8.80	24.59	18.62
100 to 104 pounds	125.00			76.70	68.29	54.26	40.40	46.92	54.92	55.12
105 to 109 pounds	125.00		192.31	102.27	117.07	100.78	68.18	76.25	81.97	86.41
110 to 114 pounds	375.00	500.00	230.77	193.18	243.90	170.54	156.57	134.90	151.64	166.11
115 to 119 pounds	250.00		153.85	278.41	209.76	279.07	207.07	234.60	206.56	222.35
120 to 124 pounds		125.00	76.92	153.41	97.56	170.54	161.62	175.95	142.62	147.86
125 to 129 pounds		250.00	230.77	82.39	102.44	93.02	126.26	140.76	125.41	119.55
130 to 134 pounds			115.38	48.30	82.93	31.01	113.64	76.25	89.34	82.31
135 to 139 pounds	125.00			31.25	39.02	54.26	63.13	52.79	63.11	54.75
140 to 144 pounds				14.20	9.76	7.75	35.35	35.19	33.61	27.93
145 to 149 pounds				2.84			12.63	8.80	10.66	8.19
150 to 154 pounds				2.84			5.05	2.93	9.02	5.59
155 to 159 pounds								2.93	2.46	1.49
160 pounds and over					9.76	7.75	2.53	2.93	4.10	3.72
Total	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00

Fifty-four per cent weighed less than 120 pounds.

Table E shows the chest measurements of recruits and the relation of chest measurement to age:

TABLE E.—*Relation of chest measurement to age.*

ABSOLUTE NUMBERS.

Chest measurement.	Age. 18 years and under.	19 years.	20 years.	21 years.	22 years.	23 years.	24 years.	25 years.	26 years and over.	Total.
26 inches and under				3	1		1	1	1	7
27 inches				6	6		3	5	6	26
28 inches		1		26	15	2	8	7	27	86
29 inches	4		1	55	28	24	29	34	93	268
30 inches		2	6	52	30	20	66	56	185	417
31 inches	2	3	12	86	47	37	109	79	279	654
32 inches		1	5	81	44	29	87	80	292	619
33 inches	2			26	20	12	54	45	189	348
34 inches		1	1	13	12	4	29	27	94	181
35 inches			1	3	2		7	4	32	49
36 inches and over				1		1	3	3	22	30
Total	8	8	26	352	205	129	396	341	1,220	2,685

TABLE E.—*Relation of chest measurement to age*—Continued.

PROPORTIONAL NUMBERS.

Chest measurement.	Age.									Total.
	18 years and under.	19 years.	20 years.	21 years.	22 years.	23 years.	24 years.	25 years.	26 years and over.	
26 inches and under				8.52	4.88		2.53	2.93	0.82	2.61
27 inches				17.05	29.27		7.58	14.66	4.92	9.68
28 inches		125.00		73.86	73.17	15.50	20.20	20.53	22.13	32.03
29 inches	500.00		38.46	156.25	136.59	186.05	73.23	99.71	76.23	99.81
30 inches		250.00	230.77	147.73	146.34	155.04	166.67	164.22	151.64	155.31
31 inches	250.00	375.00	461.54	244.32	229.27	286.82	275.25	231.67	228.69	243.58
32 inches		125.00	192.31	230.11	214.63	224.81	219.70	234.60	239.34	230.54
33 inches	250.00			73.86	97.56	93.02	136.36	131.96	154.92	129.61
34 inches		125.00	38.46	36.93	58.54	31.01	73.23	79.18	77.05	67.41
35 inches			38.46	8.52	9.76		17.68	11.73	26.23	18.25
36 inches and over				2.84		7.75	7.58	8.80	18.03	11.17
Total	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00

Fifty-four per cent had a chest measurement of 31 inches or under.

The following table shows the causes of rejection among the 2,981 candidates for enlistment examined during the year:

TABLE F.—*Causes of rejection.*

	Number rejected.	Ratio per 1,000.
1. Defects of vision	38	149.61
2. Chest development insufficient	31	122.05
3. Heart disease	28	110.24
4. Venereal diseases	25	98.43
5. Tuberculosis	19	74.80
6. Hernia	15	59.06
7. Defects of hearing	14	55.12
8. Under weight	12	47.24
9. Varicocele	9	35.43
10. Varicose veins	8	31.50
11. Diseases of the skin	8	31.50
12. Curvature of the spine	8	31.50
13. Defective teeth	6	23.62
14. Physical debility	5	19.69
15. Defects of development except as shown in detail	5	19.69
16. Flat feet	5	19.69
17. Weakness of mind	3	11.81
18. Injuries	3	11.81
19. Epidemic diseases	2	7.87
20. Diseases of the eye except defects of vision	2	7.87
21. Diseases of the genito-urinary system (nonvenereal)	2	7.87
22. Diseases of the organs of locomotion except spinal curvature	2	7.87
23. Alcoholism	1	3.94
24. General diseases except as shown in detail	1	3.94
25. Diseases of the ear except defects of hearing	1	3.94
26. Hemorrhoids	1	3.94
Total	254	1,000.00

It is notable that defects of vision caused nearly 15 per cent of all rejections of Filipinos, while causing only about 10 per cent of rejections for American and Porto Rican troops; heart disease and tuberculosis also caused a larger proportion of rejections among the Filipino recruits, while venereal diseases caused almost exactly the same percentage of rejections in the three races.

SURGICAL OPERATIONS.

Ninety operations were done upon enlisted men of the Philippine Scouts with 2 deaths, 1 due to a traumatic rupture of the intestines, and the other to perforation of a tubercular ulcer of the intestines.

Surgical operations performed on Philippine Scouts.

Operation.	Disease or injury.	Cases.	Result.				Anesthetic.			
			Successful.	Partially successful.	Failure.	Died.	Chloroform.	Ether.	Local.	None.
	Eye.									
Grattage	Trachoma	1	1						1	
Excision	Pterygium	2	1	1			1		1	
Incision and curettage	Chalazion	1	1						1	
	Thorax.									
Thoracotomy	Empyema	1	1				1			
	Abdomen.									
Celiotomy and drainage	Abscess of liver	1	1					1		
Celiotomy	Intestinal obstruction (volvulus).	1	1				1			
Do	Peritonitis, tubercular perforating.	1				1		1		
Incision and drainage of lumbar abscess.	Contusion of kidney and rupture of intestines.	1				1	1			
Bassini's operation	Hernia, inguinal	8	8				1	7		
Aspiration for abdominal exploration.	Disease not stated	2			2				2	
	Anus and rectum.									
Incision and curettage	Ischio-rectal abscess	1	1						1	
Excision and curettage, 2; division of sphincter, 1.	Fistula in ano	3	3				1	2		
Excision and ligation, 3; excision and suturing, 2; incision and removal of clot, 2.	External hemorrhoids, 6; internal, 1.	7	7					3	4	
	Genito-urinary system.									
Supra-pubic cystotomy, 1; median lithotomy, 1.	Vesical calculus	2	2					2		
Excision	Cyst of urachus	1	1				1			
High excision, 1; low excision, 1.	Varicocele	2	2					1	1	
Tapping and injection	Hydrocele	2	2						1	1
Circumcision	Chancroid	1	1					1		
	Skin and cellular tissues.									
Excision	Indurated nodules	1	1					1		
Incision and drainage	Cellulitis	2	2				1		1	
Incision and drainage, 10; incision and curettage, 3.	Abscess	13	13				1		4	8
	Lymphatic glands.									
Excision of axillary glands	Paragonimiasis	1	1					1		
Incision and drainage	Adenitis, axillary, 1; adenitis, submaxillary, 1; femoral, 1.	3	3							3
Incision and drainage, 6; incision and curettage, 7; excision, 4.	Adenitis inguinal venereal, 16; adenitis inguinal nonvenereal, 1.	17	17				4	5	8	
Excision	Fistula following incision of inguinal adenitis.	1	1				1			
	Tendons.									
Tenorrhaphy	Severed tendon of finger	1	1				1			
	Amputations.									
Amputation of finger	Gunshot wound, 2; disease, 1	3	3				3			
Amputation of toe and excision of corresponding metatarsal.	Compound comminuted fracture.	1	1				1			
	Tumors.									
Excision	Cystic, 2; dermoid, 1; fibroma, 4; sebaceous cyst, 1.	8	8				1		7	
	Plastic surgery.									
Skin grafting, Thiersch's method	Burn of leg	1	1					1		
Total		90	85	1	2	2	20	26	32	12

PREVALENCE OF DISEASE BY RACES.

In making this comparison it is to be borne in mind that the native troops were serving in their own country under conditions natural to them, but inimical to our troops, and that American soldiers excused from any portion of their military duty, no matter how trivial the cause, are placed on sick report, while this is not the case with the Philippine Scouts.

All the rates, except that for discharge for disability, were considerably lower for Filipino than for American troops; the discharge rate was the same for both races; the constantly noneffective rate for the Filipino troops was about one-half that for American troops.

The following tables indicate the relative susceptibility of the two races to the diseases noted:

Disease.	American troops.			Filipino troops.
	Total.	White.	Colored.	
Venereal diseases	311.22	276.94	494.31	63.48
Diarrhea and enteritis	72.48	73.57	66.67	54.07
Dengue	63.08	55.31	104.61	13.25
Dysentery	42.23	41.91	43.90	23.94
Dyspepsia	40.52	38.26	52.57	20.30
Alcoholism	29.23	32.47	11.92	1.28
Articular rheumatism, acute and chronic	9.48	6.39	26.01	4.06
Diseases of the liver	7.35	6.90	9.76	4.49
Tuberculosis	6.84	7.00	5.96	4.92
Typhoid fever	3.50	4.16	.....	1.28
Appendicitis	3.25	3.55	1.63	1.07
Measles	2.91	3.04	2.17	.43
Heart disease, organic, including endocarditis and pericarditis	2.57	2.03	5.42	1.07
Pneumonia	1.97	.91	7.59	.64
Insanity	1.88	2.23	.....	.85

Disease.	Filipino troops.	American troops.		
		Total.	White.	Colored.
Malarial fevers	312.67	167.79	189.97	49.32
Bronchitis, acute and chronic	45.31	36.76	31.76	63.41
Constipation	39.32	27.01	25.27	36.31
Abscess, acute	33.34	31.20	31.46	29.81
Dhobie itch	33.34	17.61	16.03	26.02
Beriberi	24.58	.09	.10	.....
Fevers, undetermined	19.45	15.73	15.32	17.89
Conjunctivitis, acute	16.03	7.27	5.38	17.34
Cholera, Asiatica	.21	.17	.20	.....

The principal changes as compared with the tables of last year are that pneumonia and tuberculosis, which in 1906 were more prevalent among the Filipinos, in 1907 were more prevalent among the American troops.

SANITATION.

PUBLIC BUILDINGS AND GROUNDS.

Overcrowding has been reported from a number of posts, but the most constantly recurring complaint has been of leaky roofs, and especially where the rubberoid roofing has been employed.

Recommendation was made last year for screening all hospitals, barracks, and quarters, the construction of which would permit of it, and it is understood that an allowance of $40,000 has since been made to begin this important work. In the meantime and in such

situations as do not permit the use of screens, mosquito bars must continue in use. While they can not take the place of screening, they serve a very useful purpose when properly designed and constructed. They should be of ample size to prevent the sleeper from coming in contact with them and getting bitten through the net, of small enough mesh (18 holes to the inch) to exclude the malarial mosquito, of strong bobbinet to resist ordinary strains, reenforced at the corners and angles and bound around the lower 2 feet with muslin to keep them from tearing when tucked in under the mattress. The size of the bedstead is also of importance. It should be about 7 by 3 feet to prevent the sleeper from touching the net; camp cots should never be used in permanent stations, as with them mosquito bars afford very little protection.

At all permanent posts construction of barracks and quarters should be of a permanent character. The buildings should be specially designed for tropical service, thoroughly screened against flies and mosquitoes, provided with porches to keep the sun's rays from the walls, and with a concrete base to isolate them from the subjacent soil dampness. The construction should probably be concrete, with native hard-wood floors and tile roofing. In any case, before standard plans are decided upon, this office should have an opportunity to be heard as to the sanitary features involved.

DRAINAGE, SEWERAGE, AND DISPOSAL OF WASTES—WATER SUPPLY—CLOTHING.

There have been few changes of importance since the last report; at the posts of Jolo, Parang, and Zamboanga there has been considerable new construction, including water and sewerage systems. A number of improvements have also been made at Camp Hay, Benguet, and at the Los Baños Hot Springs, Laguna, with a view of fitting up these places as sanatoria for the troops.

A great majority of the posts still use earth closets, which are at best an unsatisfactory method of disposal of excreta. McCall incinerators have given such satisfactory results in Cuba and in camps in the United States that there is no reason to doubt they would be equally useful in the Philippine Islands, and it is recommended that a sufficient number of these be sent to replace the earth closets where sewers are not available.

FOOD SUPPLY.

There has been temporary failure in the supply of fresh meat, etc., at some of the remote posts, due to more or less unavoidable causes, but in general the food supply and its preparation have been satisfactory.

TROOPS ON TRANSPORT.

During the year 1907 about 8,000 enlisted men left the United States on transports for passage to foreign stations, and about 6,000 returned from foreign stations.

The sanitary condition of the transports has not been altogether satisfactory. The principal defects reported have been overcrowding, defective ventilation, and excessive dampness of living quarters.

All these defects are serious on the long trans-Pacific voyages, and as they are remediable, the proper steps should be taken to correct them.

Outbreaks of contagious disease, especially the eruptive fevers, have occurred frequently on the voyages to Manila. Greater care is necessary to prevent these epidemics, and recommendation has accordingly been made for a change in the transport regulations so as to prevent the introduction of contagion on transports.

BOARD FOR THE STUDY OF TROPICAL DISEASES.

Since the last report the personnel of the board has been entirely changed, Captain Ashburn and Lieutenant Craig, whose tours of foreign service had expired, having been relieved by Captain Phalen and Lieutenant Nichols. The work of the board has continued to be of the same high character.

The following subjects were systematically studied:

AMEBAS.

It will be remembered that the first board had concluded that *entamœba dysenteriæ* may be readily distinguished from *entamœba coli*. The present board reports as follows:

> These cultures have been studied with great care in connection with amœbæ found in stools, with the result that we were unable in either case to find constant characteristics to at all warrant a differentiation into species. Still less do we feel that the appearance of an amœba can be relied upon to determine its pathogenicity. We do not doubt the probability of a multiplicity of species, but their differentiation is work for the expert zoologist, and until such work has been done and the contrary established, it is our opinion that all amœbæ should be regarded as potentially pathogenic.

PARAGONIMIASIS.

Four cases of pulmonary paragonimiasis (endemic blood spitting) have been discovered in a company of Philippine Scouts serving in Samar, and two more in another company serving at the same station. Inquiries addressed to the medical officers of all scout posts have so far failed to elicit any more cases of the disease.

SCHISTOSOMIASIS.

A fatal case of infection with the *Schistosomum japonicum* was also observed in a Filipino scout who had never been out of the islands; it is evident, therefore, that in the diagnosis of obscure bowel troubles in the Philippines this disease must not be lost sight of.

FILIARIASIS.

A case of chylocele, with probably a beginning varicose groin gland and elephantiasis of the right leg, found in a native whose blood contained *filaria philippinensis*, would seem to indicate that this new filaria is pathogenic.

OIDIOMYCOSIS.

The board believes that infections by blastomyces and allied organisms are quite frequent in the Philippines in both man and domestic animals, producing lesions of the skin, glandular tissues, and lungs.

Observations upon the comparative staining reactions of *B. lepræ* and *B. tuberculosis*, resulting in the conclusion that neither stains nor decolorizes more readily than the other, and that it is impossible to differentiate these organisms by the methods employed.

Examination of the feces of the insane, with reference to the presence of *hymenolepis nana*. None were found in 28 cases examined, but a large and varied number of intestinal parasites were demonstrated, 23 of the 28 examined being infected with one or more parasites.

Cultivation of balantidium coli: Wright's stain best method.

Madura foot.

Surra.

Kala-azar: Leishman-Donovan bodies and Wright's bodies not found here as yet.

Rabies: Investigation emphasizes the diagnostic value of *negri* bodies.

Bilharzia disease.

Beriberi: Exclusive diet of rice and oxalic acid used with four monkeys for four months produced no symptoms of the disease.

A comparative study of Tsutsugamushi disease and spotted fever of Montana.

POMPHOLYX.

The board called attention to the wide dissemination of this disease in the Tropics. It estimates that 50 per cent of persons in the Tropics suffer from this affection, which is often passed over as prickly heat, dhobie itch, or eczema, etc.

The valuable work already done by this board is generally recognized and acknowledged. The field of its labors is wide and largely uncultivated. Much remains to be done, and every encouragement should be given our best men to become investigators into the nature of tropical diseases.

FIELD MEDICAL EQUIPMENT BOARD.

The board of officers appointed by paragraph 5, S. O. No. 262, War Department, November 7, 1907, has met from time to time during the year and although it has not completed its work the following questions have been definitely settled:

1. *Hospital tents.*—After examining several types of tents intended for use in hot climates the board will recommend the Knight tent as meeting the requirements better than any other type submitted.

2. *Field mosquito net.*—The net devised by Captain Vedder, Medical Corps, U. S. Army, for use with the shelter tent, was examined and, with slight modifications, will be recommended for adoption for use in the Army.

3. *Pack saddle.*—The board examined a number of saddles and panniers, none of which appeared to be suited to the requirements of

the Medical Department. Therefore a special pannier was devised by the board for use with the Pulman aparejo. This pannier is a modification of the Pulman pannier, but, unlike the latter, can be so adjusted as to accommodate packages of various shapes and dimensions. Twenty-four (12 sets) of these panniers are being manufactured by the quartermaster's department for trial with the troops.

4. *Four-wheeled ambulance.*—After considerable study of the problem and correspondence with various vehicle manufacturers the board finally decided to have the body of the present type of ambulance modified as follows:

The heavy, fixed top was removed and replaced by a removable and much stronger top, consisting of five heavy bows held in position by staples on outside of body of ambulance and braced by a ridgepole and two side rails to give it the necessary rigidity, this framework to be covered by a waterproof canvas top.

The top so constructed is much lighter and can be removed in a few minutes, and much space is economized in shipping.

The ambulance is designed to carry four patients on litters or eight sitting. The litters, both upper and lower, are suspended by spiral springs from the central uprights and sides of the ambulance, adequate provision being made to limit motion from side to side. These springs are, it is believed, a great improvement and make it possible to transport patients over very rough roads without discomfort.

The four seats of the present type of ambulance have been replaced by two seats, one on each side and attached in a manner similar to those now used.

The jockey box has been divided into two compartments by a central front-to-rear partition. One compartment is to be used for holding the ambulance boxes of stores and dressings, while the other is for use of the ambulance driver.

The method of attaching the tongue of the ambulance has been modified so that the danger of breaking has been reduced to a minimum.

The springs of the water cans have been modified in order to afford greater security when going over bushes or other obstructions.

The footboard in front of body has been strengthened by the addition of iron braces extending from the sills of body.

It was not deemed advisable to change the type or weight of the running gear of the ambulance, as it is the opinion of the board that it is now as light as it can be made consistent with safety.

The above changes reduce the weight somewhat, however, and at the same time make the ambulance a much more desirable vehicle for transporting sick and wounded.

5. *Ambulance cart.*—In addition to the modified four-wheeled ambulance described above, the board has devised a two-wheeled ambulance.

This is not intended to take the place of the large vehicle, but to supplement the latter. It is believed that it can be used on rough roads and across country which would be impracticable for the four-wheeled ambulance. It is designated to carry two patients on litters or four sitting, and may be drawn by either one or two horses.

It is also provided with a removable top similar to that on the large ambulance.

DRILL REGULATIONS.

A new and revised edition of the "Drill Regulations and Outlines of First Aid for the Hospital Corps, U. S. Army," has been prepared and issued to replace that of 1904. The principal changes have been the incorporation of an adaptation of so much of the Drill Regulations for the Hospital Corps, U. S. Navy, as relates to the use of the Stokes litter on transports and hospital ships; an entirely new set of illustrations replacing those of the old regulations, which were very defective; a few changes of method in the line of improvement, and the correction of errors.

MEDICAL DEPARTMENT.

The act to increase the efficiency of the Medical Department of the U. S. Army, approved April 23, 1908, provides that the Medical Department shall consist of a Medical Corps, and a Medical Reserve Corps; and the Hospital Corps, the nurse corps, and dental surgeons as now authorized by law.

MEDICAL CORPS.

The number of officers of the regular corps is increased from 322 to 445. The act also provides that the increase in the grades of colonel, lieutenant-colonel, and major shall be filled by promotion each year of not to exceed 2 lieutenant-colonels to be colonels; 3 majors to be lieutenant-colonels, 14 captains to be majors, and of the increase in the grade of first lieutenant not more than 25 per cent of the total of such increase shall be appointed in any one calendar year. The new organization can not, therefore, be completed earlier than January 1, 1911. The strength of the Medical Corps will then finally constitute 44 per cent of the number required for the service in the front and rear for an army of 100,000 men in time of war.

Immediately following the approval of the act, the officers of the Medical Department, other than the Surgeon-General, were recommissioned in the corresponding grades in the Medical Corps established by the act in the order of their seniority and without loss of relative rank in the Army as follows: Assistant surgeons-general with rank of colonel, as colonel; deputy surgeons-general with rank of lieutenant-colonel, as lieutenant-colonels; surgeons with rank of major, as majors; assistant surgeons who at that date had served three or more years, as captains; and assistant surgeons who at that date had served less than three years, as first lieutenants.

The provisions of the act concerning examinations for promotion constitute a radical departure from the system heretofore in force. Majors who fail in their examination are now debarred from promotion, and captains and first lieutenants who are unable to demonstrate their professional efficiency before the promotion boards are given an honorable discharge and a year's pay.

It is believed that the new system rigorously carried out will provide a proper and efficient method for the elimination of officers who have shown a lack of aptitude for the military service, or who through loss of interest in their professional and other duties are no longer qualified to perform the services required of them.

The scope of the examination for captains and lieutenants is the same as heretofore and that of majors covers subjects that pertain

especially to the duties of the higher sanitary and administrative officers of the Medical Corps.

The following table exhibits the loss of medical officers during the fiscal year:

	Colonels.	Lieutenant-colonels.	Majors.	Captains.	First lieutenants.	Total.
Retired from active service	1	2	3		1	7
Resigned			1	2	1	4
Died			1			1
Aggregate	1	2	5	2	2	12

The additional major and surgeon provided by the act of March 2, 1907, lapsed with the death of Maj. James Carroll, surgeon, U. S. Army, for whom the extra number was created. The number of medical officers in service on June 30, 1908, was 301, leaving 55 vacancies at that date.

From July 1, 1907, to April 22, 1908, the following promotions were made: One lieutenant-colonel, deputy surgeon-general, to be colonel, assistant surgeon-general; 2 majors, surgeons, to be lieutenant-colonels, deputy surgeons-general; 4 captains, assistant surgeons, to be majors, surgeons; and 21 first lieutenants, assistant surgeons, to be captains, assistant surgeons.

From April 22, 1908, to June 30, 1908, the following promotions were made: Two lieutenant-colonels to be colonels; 6 majors to be lieutenant-colonels; 19 captains to be majors, and 34 first lieutenants to be captains.

The promotion of 1 major to be lieutenant-colonel and 3 captains to be majors have not yet been actually made, but when commissioned their rank will antedate June 30, 1908, the vacancies having occurred prior to that date.

After completing the full course of instruction at the Army Medical School and passing the qualifying examination, 10 candidates for the Medical Corps were appointed first lieutenants.

One contract surgeon eligible under the provisions of the act of April 23, 1908, was examined, found qualified, appointed first lieutenant, and immediately retired from active service on account of age. Thirty first lieutenants having completed three years' service at the time of the passage of the reorganization act were promoted to the grade of captain subject to examination, it being impracticable on account of the lack of mileage funds to order them up for examination prior to July 1, 1908.

Three majors examined for promotion were found not qualified professionally, and the findings having been confirmed by a board of review, they were debarred by law from further promotion.

At the preliminary examination held May 4, 1908, 9 candidates were found qualified and will be commissioned in the Reserve Corps and ordered to the Army Medical School for a course of instruction, afterwards being commissioned in the regular corps in case they demonstrate their fitness therefor.

The increased inducements now offered for the Medical Corps have attracted more men than was the case under former conditions, and there is every prospect of obtaining a large class of candidates for the next session of the Army Medical School.

Twenty-one vacancies remain from the old organization; these and the 34 vacancies authorized by the new act will not in all probability be filled this year, but it is hoped that as soon as the better inducements become more generally known throughout the medical profession a larger number of candidates for the Medical Corps will present themselves for examination.

MEDICAL RESERVE CORPS.

As soon after the approval of the act to increase the efficiency of the Medical Department, as the necessary preliminaries incident to their change of status could be completed, 160 contract surgeons employed by the War Department under standard contracts made with them by the Surgeon-General, were recommended for commissions in the Medical Reserve Corps. These commissions bear the date of July 7, 1908. All these officers of the Reserve Corps, except one who did not desire active service at present, were recommended for and have been given active employment with the Army at the stations at which they were serving at the time they were commissioned. Four of the successful candidates at the recent preliminary examination for the Medical Corps were also commissioned in the Medical Reserve Corps on the same date, and 2 of them, as their services were required, have been given active employment with the Army. In addition, 8 contract surgeons who were serving under the so-called substandard contracts at arsenals and like stations which make demands on but part of their time were also commissioned in the Reserve Corps on the date already mentioned, but have not yet been given active employment therein; all still being employed under their former contracts which provides a less rate of pay than that received by officers of the Reserve Corps, but one believed to be adequate in the circumstances. One surgeon employed under a subcontract is a retired medical officer of the Navy, so, while still employed, he could not accept a commission. By the action detailed above the status of all contract surgeons has been changed to that of commissioned officers and great benefit should ultimately result from correcting the former unpleasant and anomalous positions of these gentlemen.

In order to build up the Reserve Corps with desirable material, a strong effort has also been made to induce prominent physicians, surgeons, hygienists, and laboratory workers throughout the country to head it. It is very gratifying to be able to state that notable success has attended this plan, as the patriotism of a large percentage of the doctors communicated with has prompted favorable action on their part.

It is, however, unreasonable to expect that medical men should be more self-sacrificing than their contemporaries in other professions, and it will probably become necessary at some time in the future to offer financial compensation as a retainer for reserve officers, especially should it prove desirable to ask these officers, or some portion of them, to come out for training for a short period each year.

This training would not be required of the eminent medical men who have already accepted commissions on the inactive list of the reserve corps and who could not be expected to sacrifice the time from their professional work, but would be highly desirable for the younger officers not yet established in practice.

CONTRACT SURGEONS.

There were 177 contract surgeons in service at the close of the fiscal year ending June 30, 1907. During the past fiscal year contracts were made with 34 physicians, while 31 contracts were annulled and 1 was terminated by death, leaving 179 in service June 30, 1908. Contract Surg. T. Ogier Hutson, U. S. Army, was killed January 8, 1908, near Gordon, Ga., by falling from a railroad train. Nearly all of the contract surgeons in service at the close of the fiscal year have been appointed first lieutenants in the Medical Reserve Corps. The contracts of all those not so appointed have been or will be annulled as soon as the necessary arrangements can be made. Ten remain under contract at present. The great shortage of medical officers has made it extremely difficult to supply the maneuver camps. In fact, it has been impossible to do so in anything like the numbers required by regulations. In order to make medical officers available so that the sick would not actually suffer from lack of medical attendance at such camps, authority for the employment of civilian physicians under contract for the maneuver period, at points where their services could be obtained, has been very generally given to chief surgeons of departments. The exact number of physicians temporarily so employed can not be stated at this date.

DENTAL SURGEONS.

Thirty-one dental surgeons are allowed by existing law, 1 additional to the 30 previously employed having been authorized for the past fiscal year, and for the present one. One contract was annulled and two were made. Thirteen dental surgeons are serving in the Philippine Islands, 2 in Cuba, and 16 in the United States.

A summary of the work of the contract dental surgeons is contained in the following tables. The figures are practically the same as those for the previous year:

Dental and oral diseases.

	United States (continental), exclusive of Alaska.		Philippine Islands.		Alaska.	
	Number.	Ratio per 1,000 of mean strength.	Number.	Ratio per 1,000 of mean strength.	Number.	Ratio per 1,000 of mean strength.
Cases admitted to treatment	21,075	599.88	12,191	744.35	851	1,004.72
Operations performed	22,880	651.26	12,035	734.83	778	918.54

	Cuba.		Hawaii.		Total.	
	Number.	Ratio per 1,000 of mean strength.	Number.	Ratio per 1,000 of mean strength.	Number.	Ratio per 1,000 of mean strength.
Cases admitted to treatment	3,451	777.95	.....	.....	37,568	642.39
Operations performed	3,669	827.10	.....	.....	39,362	673.06

Dental caries—Number of teeth treated.

	United States (continental), exclusive of Alaska.		Philippine Islands.		Alaska.	
	Number.	Ratio per 1,000 of mean strength.	Number.	Ratio per 1,000 of mean strength.	Number.	Ratio per 1,000 of mean strength.
White troops	12,432	364.67	6,646	674.45	643	759.15
Colored troops	489	469.74	954	517.07	.....	.....
Filipino troops	.....	.....	57	12.18	.....	.....
Total	12,921	367.78	7,657	467.52	643	759.15

	Cuba.		Hawaii.		Total.	
	Number.	Ratio per 1,000 of mean strength.	Number.	Ratio per 1,000 of mean strength.	Number.	Ratio per 1,000 of mean strength.
White troops	2,446	551.40	.....	.....	22,167	437.18
Colored troops	.....	.....	.....	.....	1,443	465.78
Filipino troops	.....	.....	.....	.....	57	12.18
Total	2,446	551.40	.....	.....	23,667	404.69

ARMY MEDICAL SCHOOL.

The twelfth session began October 1, 1907, and closed May 31, 1908.

The number of student candidates admitted was 10, and of medical officers of the militia (under provision of G. O. No. 139, 1905, and G. O. No. 134, 1907) 5.

The 10 student candidates completed the course and were awarded certificates of proficiency. Of the medical officers of the militia, 2 failed to complete the course, 1 on account of sickness and the other upon his own request to be relieved from attendance. Of the remaining 3, 1 failed to pass the examination, so that only 2 were awarded certificates of proficiency.

The following table shows the subjects taught, the hours of instruction in each subject, and the names of the instructors:

No.	Hours.	Subject.	Instructor.	Valuation.	
				Maximum.	Minimum.
1	112	Duties of medical officers, medical department administration, and customs of the service.	Maj. Wm. H. Arthur and Capt. B. K. Ashford.	1,000	800
2	280	Clinical microscopy and bacteriology	Capt. F. F. Russell	900	720
3	23	Military hygiene	Col. V. Havard	800	640
4	22	Military surgery	Maj. F. A. Winter	800	640
5	24	Military and tropical medicine	Maj. W. D. McCaw	800	640
6	170	Sanitary chemistry	Capt. C. R. Darnall	600	480
7	58	Hospital corps drill and field work	Capt. B. K. Ashford	500	400
8	24	Operative surgery	Capt. W. D. Webb	400	320
9	52	Ophthalmology and optometry	Maj. W. D. Crosby	400	320
10	10	Roentgen-ray work	Capt. W. D. Webb	300	240

In addition to the above the following instruction was also given: Twenty hours in equitation at Fort Myer, Va., by Capt. E. B. Cassatt, Thirteenth Cavalry, and Second Lieut. B. T. Merchant, Thirteenth Cavalry.

A series of six lectures on military law by Gen. Geo. B. Davis, Judge-Advocate-General, U. S. Army, and Maj. John B. Porter, Judge-Advocate-General's Department.

A series of three lectures on "Parasites in man" by Dr. C. W. Stiles, Public Health and Marine-Hospital Service.

A series of four clinics on "Insanity" at the Government Hospital for the Insane, by Dr. Wm. A. White.

A series of lectures on "Mosquitoes" by Miss C. Ludlow.

A lecture on "Bacterial vaccines" by Lieutenant-Colonel Leishman, Royal Army Medical Corps.

The class during the session also attended a series of surgical clinics given by Maj. Wm. H. Arthur at the general hospital, Washington Barracks.

The graduating examination began May 18 and the closing exercises, including the award of diplomas, were held May 29.

Of the 10 student candidates 6 graduated with honor, having attained a general average of more than 90 per cent of all possible marks. This is the best record so far made in this school. Not only did the students excel in their studies, but their conduct and deportment were also at all times irreproachable.

The Hoff medal for the highest standing in the graduating class was awarded to Dr. Mahlon Ashford.

The final examination for commission in the Medical Corps began June 1 and closed June 6. The candidates consisted of the 10 student graduates. They were all found qualified, physically and mentally, and recommended for commission as first lieutenants in the Medical Corps.

The changes made since the last session by G. O. No. 134, War Department, 1907, in the scope of the preliminary and final examinations are believed to be distinct improvements on the former methods and clearly in the interest of the service.

There is also every reason to hope that the much brighter prospects opened out to young graduates from our best medical schools by the recent reorganization of the Medical Corps will soon fill up this school to its full capacity.

Since the last session of the school specimens of the field medical equipment of our own and foreign armies have been arranged for exhibition in one of the rooms of the school section of the museum. Much useful and interesting material has thus been made available for the practical instruction of students and medical officers.

HOSPITAL CORPS.

At date of last report, June 30, 1907, the strength of the hospital corps was as follows:

Sergeants, first class	266
Sergeants	289
Corporals	20
Privates, first class	1,468
Privates	1,276
Total	3,319

Since then it has gained—

By enlistment	1,065
By transfer	968
Return from desertion	69

And lost during the same period—

By discharge by expiration of term of service	1,227
By discharge by order	187
By discharge by sentence general court-martial	76
By discharge by surgeon's certificate of disability	83
By transfer to line	36
By retirement	18
By death due to disease	14
By death due to suicide	2
By death due to drowning	1
By death due to asphyxiation	1
By desertion	245

Leaving in service, June 30, 1908—

Sergeants, first class	277
Sergeants	297
Corporals	17
Privates, first class	1,480
Privates	1,460
Total	3,531

Total number of losses during the year, 1,890; gain, 2,102.

Of the applicants who were examined in June, 1907, for the position of sergeant, first class, 32 were appointed, filling the vacancies in that grade existing up to the latter part of August, 1907. Comparatively few vacancies occurred in this grade up to the spring of 1908, and as the needs of the service seemed to have been sufficiently supplied with this class of noncommissioned officers, an examination for promotion was not deemed necessary in the spring. As, however, by the end of the fiscal year the number of vacancies had increased to about 25, with a prospect of a further increase in the near future, it has been arranged to hold an examination in the middle of November. Information to that effect has been sent to the chief surgeon of the Philippines Division, and to the chief surgeons in the United States and Cuba.

Examinations for promotion to the position of sergeant were held in the early part of this year by the chief surgeons of nearly all of the military departments, with the result that all existing vacancies in that grade were filled. The names of a considerable number of successful candidates had, moreover, to be placed upon the eligible list, and they will be recommended for appointment whenever vacancies may occur.

The number of sergeants, first class, allowed by law (300) appears to meet all the demands of the service under peace conditions. This is, however, not the case with sergeants and corporals, the allowance of which is 300 for the former and 20 for the latter. An increase of 50 sergeants and 20 corporals has been recommended in the estimates for the fiscal year ending June 30, 1910, and is considered to be very conservative, particularly so as the total number of hospital corps men allowed under existing laws and regulations (3,500) is not thereby increased. This additional number of sergeants and corporals will enable this office to meet a constantly increasing demand for this class of noncommissioned officers, and also provide for many emergency calls.

An increase in the number of corporals is particularly desirable, as many hospital corps men, though worthy in every other respect, are not able to pass the required examination for promotion to the grades of sergeant and sergeant, first class. Their early education

stands in the way of deriving all the advantages from the courses of instruction given to all hospital corps men, and this prevents them from making a creditable showing on examination in technical subjects which are prerequisite for appointment to the higher grades in the corps. Many of these men, however, are excellent and experienced soldiers, good disciplinarians, and in many respects would be of great value to the corps as noncommissioned officers. A further reason for the proposed increases in the grades of sergeants and corporals is the necessity of maintaining the proper proportion of noncommissioned officers to privates—1 to 4—provided by Army Regulations, 1435.

A school for the training of selected soldiers of the Philippine Scouts in the duties of the hospital corps was established at Cotabato, Mindanao, in August, 1907, by the commanding general, Philippines Division, with the object of educating enough specially qualified scouts to perform their own hospital work, which would otherwise devolve upon regular hospital corps men. No doubt is entertained of the success of this work and of its great value both to the hospital corps of the Regular Army and to the Philippine Scouts.

The stations of the four regular instruction companies of the corps have been the same as last year except that Company B was transferred in July, 1907, from the post of Presidio to the general hospital, Presidio.

Pursuant to orders from the Headquarters Department of Luzon, a detachment consisting of 5 noncommissioned officers and 30 men of Company D, Hospital Corps, under command of Capt. Perry L. Boyer, Medical Corps, was sent in January, 1908, from Fort Wm. McKinley to Panay, Rizal, for temporary duty during the division meet at that place—going and returning by marching.

During the summer of 1907 one-half of Company C, Hospital Corps, under command of Capt. Bailey K. Ashford, was sent to Camp Perry, Port Clinton, Ohio, for duty during the national match to be held on the Ohio State rifle range at that place.

For the summer maneuvers of 1908 the two companies of the Hospital Corps in the United States—C and B—were divided into halves. Those of Company C were sent from the Army General Hospital, Washington Barracks, to the camps at Pine Plains, N. Y., Fort Benjamin Harrison, Ind., Chickamauga Park, Ga., and Fort Riley, Kans.; and those from Company B from the general hospital, Presidio, of San Francisco, to the camps at Leon Springs, Tex., American Lake, Wash., and Atascadero Ranch, Cal.

For some time past a number of hospital corps men, showing special aptitude for their work, have been assigned to the schools for bakers and cooks at Washington Barracks and at the Presidio of San Francisco, for a four months' course of instruction. After graduation therefrom they were sent to posts where specially educated cooks are needed. The results have been satisfactory in the main and to the advantage of hospital management.

The readjustment of the pay of the enlisted men of the Army (act of May 11, 1908) has resulted in retaining in the hospital corps a number of trained men who otherwise would have been lost to the service, and in returning to the corps a number of equally well-trained men who had already left the service. The number of applications from civil life for first enlistment has also considerably increased,

thus enabling the department to select a much better class than was formerly the case.

One very grave condition confronts the hospital corps, however, which may result in seriously undermining its efficiency. Applications from privates in the hospital corps are now frequently received for transfer back to the line, on the plea that they will receive better pay there than in the hospital corps. In illustration of this fact, attention is particularly invited to part of an indorsement of the commanding general, army of Cuban pacification, on the application of a private, first class, hospital corps, for transfer to the coast artillery, because "the new pay schedule will give him an opportunity to better himself materially in the line."

A soldier, like everyone else, is doing duty for a money consideration, and it is undoubtedly his privilege to seek that service which will yield him the greatest compensation, and if, as indicated by this paper, it is to the soldier's advantage to serve in the line of the Army under the new pay table, it is going to be an impossibility to obtain voluntary transfers from the line to the hospital corps of desirable men, as it has been very difficult with the pay in favor of the hospital corps over the line, to secure a sufficient number of transfers to keep up the complement in the hospital corps.

This phase of the question should receive the consideration of the Department, with a view to a proper solution of the question that is raised. The efficiency of the hospital corps is of the utmost moment to all branches of the service, and we should have in it only such men as are adapted to its peculiar requirements, and the attractions of the corps should be such as to retain excellent men, such as the writer of this communication is reported to be.

THOMAS H. BARRY,
Major-General, U. S. Army, Commanding.

Twenty-four hospital corps men, 6 noncommissioned officers, and 18 privates, under command of Captain Ashford, Medical Department, were sent to Hattiesburg, Miss., and assisted in the relief work to alleviate the sufferings caused by the cyclone last April.

Private Robert L. Fisher, Hospital Corps, was awarded a certificate of merit December 11, 1907, for rescuing a comrade from drowning, at the risk of his own life, while a private, Battery A, First Field Artillery, at Medicine Creek, near Fort Sill, Okla.

THE NURSE CORPS.

During the fiscal year 389 nurses applied for admission to the Army Nurse Corps. There were 40 discharges and 25 appointments; of these 6 had had previous service.

On June 30, 1908, there were 81 nurses in the corps, distributed as follows:

General hospital, Presidio of San Francisco, Cal	30
Detailed to duty on the transport *Crook*	2
General hospital, Fort Bayard, N. Mex	20
Division hospital, Manila, P. I	16
Zamboanga, Mindanao	4
Camp Keithley, Mindanao	3
Fort William McKinley	4
En route to Philippine Islands	2

The difficulty, always sufficiently great, of securing desirable applicants increases rather than diminishes, and the deficit caused thereby reached its climax at the close of the fiscal year, when there were 19 vacancies in the nurse corps, only 2 of which it was possible to fill. Not since August 1, 1907, has the corps been at its full strength—100 nurses.

During the year an effort was made to ascertain the cause for the manifest unwillingness of nurses to enter the Army Nurse Corps. Data received showed that of those who applied and returned the blanks unfilled, one-third declined service because of the small pay and the long term (three years). Of the remaining two-thirds some begged the question, some were untrained, and the rest gave personal and family considerations.

It is a foregone conclusion that this embarrassing lack will in future be even more insistently evident than in the past. While there are practically no names on the eligible list in this office, the new Navy Nurse Corps has more than 1,000 from which to make a selection, and among these are many faithful and tried ex-army nurses who could not be induced to reenter our service. While the potent charm of novelty must account in a measure for the flocking to the new corps, the above fact is significant when we consider that to-day there are nurses in the Army Nurse Corps who after nearly eleven years of uninterrupted service receive no more pay and have no better position in the corps than the appointees of yesterday.

Added to its compelling novelty, the Navy Nurse Corps offers some substantial advantages to its nurses, all of which, however, have been from time to time the subject of recommendations from this office for our own corps, i. e., cumulative leave up to three months in three years, quarters, subsistence, and laundry for superintendent and nurses without cost to them, and much more liberal travel allowances than are provided for army nurses.

But the most vitally important advance in organization is the establishing in this city of a probationary school to which all newly appointed nurses must come. Here they can be under the direct observation and supervision of the superintendent, who can then be held to a much stricter accountability for the character and efficiency of her corps than is now possible. The nurses will receive instruction as to their duties in military hospitals and be shown the high standards of conduct to which they are expected to conform. At the same time their general fitness and acceptability can be tested. As a large majority of the appointees come from the eastern part of the country, this arrangement will do away with the furnishing of expensive transportation until after the nurse's qualifications have been determined, thus securing a double advantage in a saving to the Government and the sending abroad of none but desirable nurses.

The universally acknowledged increase in the cost of living has emphasized the insufficiency of the 30-cents allowance for the subsistence of nurses, already noted in the report of last year. Even at hospitals where many are on duty, a monthly assessment must be paid by each nurse to defray the cost of the mess.

It is recommended that—

1. As soon as suitable provision can be made for their accommodation, all newly appointed nurses be ordered to duty at the general hospital in this city.

2. The per diem allowance of 30 cents for the subsistence of nurses be increased to 50 cents.

3. Recognition of long and faithful service by an increase in the pay of nurses of 10 per cent for every five years of service, the maximum to be reached in fifteen years—this provision to be retroactive.

4. Cumulative leave for a period not to exceed three months be allowed.

5. Provision be made for nurses' laundry work either in the hospitals themselves or by contract with outside parties.

UNITED STATES ARMY GENERAL HOSPITAL, PRESIDIO, SAN FRANCISCO, CAL.

In addition to the repairs to the buildings at the post made necessary by the earthquake, a new laundry and an exchange and gymnasium building have been constructed during the past year. The number of cases treated in this hospital during 1907 shows a decrease of 450 compared with the preceding year. There were 142 soldiers discharged for disability, 31 transferred to the Government Hospital for the Insane, and 43 deaths from all causes occurred among the patients treated.

Of the total number of admissions, only 431 were from the Philippine Islands, a decrease of 53 admissions compared with the number treated in this hospital from the same source last year. Of the 43 deaths, 13 occurred among the officers and enlisted men. The following is a numerical statement of the movement of sick during the calendar year 1907:

	From the Philippine Islands.	From the United States.	Total.
Remaining in hospital Dec. 31, 1906	82	112	194
Total admissions during 1907	349	1,567	1,916
For gunshot wounds	9	11	20
For diarrhea and dysentery	43	30	73
For malarial fevers	4	12	16
For typhoid fever	1	10	11
For rheumatic affections	6	43	49
For venereal diseases	21	309	330
For injuries	21	264	285
For insanity	29	16	45
For alcoholism	3	64	67
For all other causes	212	808	1,020
Total returned to duty	129	892	1,021
Total discharged for disability	76	66	142
Total discharged per expiration	24	14	38
Total deaths from all causes	6	37	43
Desertions	4	13	17
Transferred to Hot Springs, Ark	4	4	8
Transferred to Fort Bayard, N. Mex	66	10	76
Transferred to Government Hospital for the Insane	21	10	31
Otherwise disposed of	46	422	468
Remaining in hospital Dec. 31, 1907	55	211	266

NOTE.—Civilians are included in the statistical statement.

UNITED STATES ARMY GENERAL HOSPITAL, FORT BAYARD, N. MEX.

The negotiations for the purchase of additional land and water, for which an appropriation of $90,000 was made by the Fifty-ninth Congress, have been practically completed. This tract, about 6 square miles in extent, comprises all the land which lies between the original reservation and the Gila National Forest with the possible exception of one small holding, the title to which is now in litigation. The numerous springs of excellent water which will be acquired by this purchase will assure at all times an ample water supply for the hospital.

The tuberculous patients belonging to the Navy have been withdrawn from the institution and sent to New Fort Lyon, Colo.

A double set of quarters for sergeants, first class, hospital corps, has been completed, and 24,200 square feet of cement sidewalks and 4,800 linear feet of macadamized road have been constructed. A large amount of fencing has been put up to exclude range cattle and to provide additional pasturage for the dairy herd.

The number of cases under treatment, December 31, 1906, was 295; on December 31, 1907, 255. The total number of cases treated during the year, excluding cases of disease occurring in soldiers on duty at the hospital, was 684. In this number is included 6 cases admitted with the diagnosis of tuberculosis in which its presence could not be determined; 2 cases of tuberculosis of the bones; 1 of tuberculosis of the bladder; 1 of tuberculosis of the testicle, and 4 cases of nontuberculous disease. The remaining 670 cases were cases of pulmonary tuberculosis. The results of treatment are shown in the following table, the classification followed being the modified Turban:

Class.	Number.	Apparently cured.		Arrested.		Improved.		Unimproved.		Died.	
		Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
Incipient	52	19	36.53	12	23.07	12	23.07	9	17.30		
Moderately advanced	370	28	7.56	151	40.81	92	24.86	96	25.96	3	0.81
Far advanced	247	1	.40	34	13.77	53	21.46	108	43.72	51	20.64
Acute miliary	1									1	100.00
Total	670	48	7.16	197	29.40	157	23.43	213	31.79	55	8.2

This table includes 1 case in which the patient died en route to the hospital, 32 cases in which the patients were under treatment less than one month, and 17 cases which were found on admission or readmission to be arrested. The benefit of sanatorium treatment is more satisfactorily exhibited in the following table, which gives the results obtained in the cases of all patients with pulmonary tuberculosis who remained under treatment at least six months, excepting 9 cases found to be arrested upon admission:

Class.	Number.	Apparently cured.		Arrested.		Improved.		Unimproved.		Died.	
		Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
Incipient	22	16	72.72	4	18.18	1	4.54	1	4.54		
Moderately advanced	225	26	11.55	111	49.33	35	15.55	51	22.66	2	0.8 8
Far advanced	136	1	.73	28	20.58	34	25.00	62	45.58	11	8.09
Acute miliary											
Total	383	43	11.22	143	37.33	70	18.27	114	29.76	13	3.39

Fifty-six deaths occurred during the year, of which 1 was due to genito-urinary disease and 1 to broncho-pneumonia. The remaining 54 deaths were caused by tuberculosis of the lungs with or without implication of other organs. As is invariably the case, the large

majority of deaths occurred in recently admitted cases. This is shown in the following table, which gives the duration of treatment in fatal cases of tuberculosis:

	Weeks—				Months—		Years—			Total.
	1.	2.	3.	4.	2 to 6.	7 to 12.	2.	3.	4.	
Time of death of 39 cases under continuous treatment....	3	1	2	8	17	4	3	1	...	39
Time of death of 15 cases not under continuous treatment:										
Reckoned from last admission.....	2	...	...	2	6	3	2	...	...	15
Reckoned from original admission.....	...	...	...	...	...	2	5	2	6	(15)
Total[a].....										54

[a] Does not include 1 case which died en route to the hospital.

UNITED STATES ARMY GENERAL HOSPITAL, WASHINGTON BARRACKS, D. C.

The buildings now occupied are badly situated and are in need of extensive repairs, but as they are to be abandoned at an early date no expenditures have been recommended. They have, however, been kept clean and as presentable as possible.

Considerable difficulty has been experienced in subsisting the patients on the 30-cent commutation of rations, especially in summer, when the purchase of ice necessary to preserve food supplies consumes a large proportion of the available funds.

The staff of the hospital has been most faithful. Many of the hospital corps men have developed into excellent nurses, operating-room assistants, and cooks, and it has been possible to care for seriously ill cases very efficiently without female nurses. There has been no complaint of neglect or roughness on the part of any nurse; in fact many of the officers treated during the year have volunteered to express their appreciation of the gentleness and attentive care of the enlisted nurses.

The hospital has served as the post hospital for Washington Barracks. The number of patients treated during 1907 was nearly double that of the previous year. The number of officers admitted for observation and treatment continues to increase, 81 being admitted during the past year, which with the 15 remaining from 1906 gives a total of 96 treated during the period mentioned. Fifteen officers were on sick report at the end of 1907.

There were 658 admissions to hospital during 1907, divided as follows: Medical 502, venereal 64, surgical 92, which with the 38 remaining under treatment from last year gives a total of 696 cases treated. Eleven deaths occurred during the year.

There were 61 major and 36 minor operations performed, 93 of which were reported as successful and 4 partially so.

The work on the new hospital is progressing satisfactorily. The main building will probably be completed in August or September of this year, but certain accessory buildings will have to be put up before the hospital can be occupied.

ARMY AND NAVY GENERAL HOSPITAL, HOT SPRINGS, ARK.

During the past calendar year 721 patients were treated in this hospital, of which 19 were officers of the Army and 2 of the Navy. The principal causes of admission were as follows:

Rheumatism:	
Chronic articular	104
Subacute articular	35
Acute	17
Chronic muscular	99
Subacute muscular	11
Nephritis	17
Arthritis, rheumatic, gouty	18
Lumbago	9
Stomach trouble	52
Sciatica	27
Neuritis	11
Neurasthenia	8

Of the total number of patients treated, 583 were returned to duty or returned to their homes, 30 were discharged for disability, 8 died, 13 were otherwise disposed of, and 87 remained under treatment at the end of the year.

PROVIDENCE HOSPITAL.

The act approved March 4, 1907, having appropriated $19,000 for the support and medical treatment of destitute patients in the city of Washington, D. C., under a contract to be made with Providence Hospital by the Surgeon-General of the Army, the relief afforded was as follows:

Patients in hospital July 1, 1907	95
Admitted during the year	1,140
Total number treated	1,235
Average number admitted per month	103
Number remaining in hospital June 30, 1908	97
Total number of days' treatment afforded	38,200
Average number of days' treatment per patient	31
Average number of patients treated per day	104
Longest term of treatment (days)	366
Shortest term of treatment (days)	1
Number of patients in hospital during the whole year	4

HOSPITAL CONSTRUCTION AND REPAIR.

During the last fiscal year plans and specifications were prepared in this office for new hospitals to be erected at Fort Douglas, Utah, Fort Mackenzie, Wyo., San Juan, P. R., and Whipple Barracks, Ariz. Plans and specifications were also prepared for enlarging the hospitals at Fort Andrews, Mass., Fort Brady, Mich., Jefferson Barracks, Mo., Fort Lincoln, N. Dak., Fort Logan, Colo., Fort Logan H. Roots, Ark., Fort Riley, Kans., Fort Slocum, N. Y., and Fort Snelling, Minn.

Contracts were entered into for the erection of new hospitals at Fort Douglas, Utah, Fort Mackenzie, Wyo., and Whipple Barracks, Ariz., but no proposals were received for the new hospital to be erected at San Juan, P. R., and Congress reappropriated the funds for the next fiscal year. It is understood that proposals are to be

invited for the erection of various public buildings at San Juan in the near future, and proposals will be invited at or about the same time for the erection of the new hospital.

Contracts were also entered into for enlarging the hospitals at Fort Andrews, Mass., Fort Lincoln, N. Dak., Fort Logan, Colo., and Fort Riley, Kans., and additions to the hospitals at Fort Leavenworth, Kans., Fort Logan, Colo., Fort Sheridan, Ill., and Fort Slocum, N. Y., were completed.

Proposals were invited on two different occasions for enlarging the hospital at Fort Logan H. Roots, Ark., but contract could not be entered into for the reason that the lowest bid received exceeded the limit fixed by law. Section 1136 of the Revised Statutes of the United States limits the cost of permanent structures to $20,000, unless special authority is obtained from Congress, and the lowest bid received for enlarging the hospital at Fort Logan H. Roots called for nearly $40,000. After due consideration it is thought that it would be more economical to erect a new modern hospital at this post than to enlarge and modernize the present structure.

A new power house was erected for the general hospital, Presidio of San Francisco, Cal. Funds were also provided to repair and improve this general hospital, to enlarge and improve the hospital accommodations in the Philippine Islands, to repair and improve the United States Army General Hospital, Fort Bayard, N. Mex., to keep the building used as a hospital at San Juan, P. R., in a sanitary condition, for all necessary repairs at the Army and Navy General Hospital, Hot Springs, Ark., and for such repairs as were absolutely needed to keep the general hospital, Washington Barracks, D. C., in a suitable condition for occupancy.

In addition to the above, all hospitals at military posts already established and occupied, were kept in proper repair and improved so far as funds would permit.

New quarters for hospital corps sergeants, first class, were authorized for the United States Army General Hospital, Fort Bayard, N. Mex., for Fort Riley, Kans., Fort Sam Houston, Tex., and for the Walter Reed United States Army General Hospital, District of Columbia. Those for the general hospitals and for Fort Riley, Kans., are double sets, and that at Fort Sam Houston, Tex., is a single set. Plans and specifications were prepared in this office for the quarters for the Walter Reed United States Army General Hospital, and for Fort Riley, Kans., and Fort Sam Houston, Tex. Contracts were entered into for each one of these buildings, and the quarters have been completed at the United States Army General Hospital, Fort Bayard, N. Mex., the Walter Reed United States Army General Hospital, and Fort Sam Houston, Tex. The double set at Fort Riley, Kans., is in course of erection and will be completed in the near future. In addition to the above, the quarters at military posts, already established and occupied, have been repaired, improved, and kept in good condition so far as funds would permit.

Owing to the increased cost of material and labor and the excessive cost of construction at some posts, it was not possible to meet all requirements from the funds appropriated, and even the increased appropriation for the coming fiscal year will not meet the demand for new quarters at various posts where such buildings are absolutely necessary. The enlargement of military posts and the increased

hospital accommodations required for the care of the sick render it necessary to provide double sets of hospital corps sergeants' quarters at the large posts, recruiting depots, and general hospitals.

MEDICAL AND HOSPITAL SUPPLIES.

The amount estimated for by this office for the fiscal year ending June 30, 1908, was $650,000. This was reduced to $644,286 by the War Department, which amount was appropriated.

On account of the extraordinary demands for supplies that have been made on the medical department since the spring of 1906, the sums that could be allotted from the medical and hospital appropriation for the purchase of supplies were not adequate to meet the demands of the service. During the past year we have been able to supply the Army only by confining our purchases to the absolutely essential articles needed in post administration.

At the beginning of the year the stock in all our supply depots was very much reduced, but during the year this condition has been greatly improved, and it is believed that with the appropriation for 1909 the stock in all the depots can be brought to normal conditions.

During the year the demand from the Philippines has not been so great as the previous year, although supplies valued at $93,600 have been shipped to that division since the 1st of July, 1907.

The issues of supplies to Cuba have been reduced very much since the initial expenditure in establishing the various posts in that island.

The Globe Building, mentioned in my last report as having been leased for a field medical supply depot, has been occupied, and is admirably adapted for that purpose.

With the cordial support from your office, the Department was able to obtain from the last Congress a special appropriation of $200,000 for the purchase of field equipment. Bids have been asked for and contracts are now being made for the expenditure of this money. It is gratifying to state that the prices obtained on recent bids are much less than those of a year ago, which will make it possible to do a great deal more toward assembling field equipment with this special appropriation than was anticipated.

The New York depot continues to be the main purchasing depot for regular medical supplies. It also continues to act as the purchasing agent of the Isthmian Canal Commission for medical supplies and equipment.

As will appear from the following tabulation, the pressure upon the medical department during the fiscal year 1908 for stores for the medical supply of other branches of the Government and of the organized militia was somewhat less than during the previous year. All the issues for these purposes are included in this exhibit, together with all of the authorized sales of serviceable stores so far as the latter were of record June 30. The amounts noted represent the first cost only of the stores in question without allowance for expenses of purchase, or losses and depreciations while on the shelves awaiting issue. Some accounts covering these transactions were outstanding June 30, and accordingly the figures here shown, which are approximately complete, considerably exceed those set down in

the financial statement at the beginning of this report, which cover settled transactions only:

A Supplies issued to States and Territories for use of the organized militia, under section 1661, Revised Statutes, and appropriations supplementary thereto:		
Georgia	$455.65	
Idaho	103.17	
Indiana	437.50	
Iowa	110.40	
Kansas	1,010.65	
Massachusetts	4,989.26	
Michigan	613.35	
Minnesota	1,514.61	
Mississippi	54.10	
Nebraska	651.30	
New Hampshire	265.70	
New Jersey	229.92	
New Mexico	36.00	
New York	5,712.50	
North Carolina	18.40	
Ohio	232.53	
Oregon	87.50	
Pennsylvania	234.50	
Tennessee	242.08	
Texas	490.00	
Vermont	57.96	
Virginia	166.70	
Washington	192.00	
Wyoming	120.00	
		$18,025.78
B. Sales to States under section 17, act of January 21, 1903 (32 Stats., 778):		
New York	70.35	
Pennsylvania	832.27	
		$902.62
C. Supplies transferred to other Bureaus and Departments of the Government:		
Bureau of Immigration	1,261.05	
Bureau of Forestry	347.50	
Navy	3,094.30	
Quartermaster's Department, U. S. Army	381.67	
Engineer Department, U. S. Army	.85	
Isthmian Canal Commission	13,963.96	
		$19,049.33
D. Supplies issued for relief of sufferers from cyclone in Southern States		3,911.51
E. Sales to the civil government of the Philippine Islands		481.38
F. Sales to civilian employees and civilians with the Army		1,891.46
Total		$44,262.08

ARMY MEDICAL MUSEUM.

The total number of specimens in the museum at the end of the fiscal year June 30, 1908, was 34,447. The following statement shows in detail the additions and changes in the different sections:

Pathological section:	
In museum June 30, 1907	12,639
Discarded and donated	29
	12,610
Received during the year	360
In museum June 30, 1908	12,970

Anatomical section:	
In museum June 30, 1907	1,203
Discarded	2
	1,201
Received during the year	1
In museum June 30, 1908	1,202
Section of comparative anatomy:	
In museum June 30, 1907	813
Discarded and donated	117
In museum June 30, 1908	696
Microscopical section:	
In museum June 30, 1908	12,916
Miscellaneous section:	
In museum June 30, 1907	2,997
Discarded and donated	32
	2,965
Received during the year	81
In museum June 30, 1908	3,046
Provisional pathological section:	
In museum June 30, 1907	719
Discarded	24
In museum June 30, 1908	695
Provisional anatomical section:	
In museum June 30, 1908	378
Photographic series:	
In museum June 30, 1908	2,544

RECAPITULATION.

Specimens in museum June 30, 1907	34,209
Discarded and donated	204
	34,005
Added during the year	442
In museum June 30, 1908	34,447

The following are some of the interesting pathological specimens received during the fiscal year ended June 30, 1908:

Nos. 13611–13770, a series of 160 plaster casts of dentures showing conditions before and after orthodontia; contributed by the American Society of Orthodontists. 13848–13919, a series of transparencies showing the internal anatomy of the face, especially the anomalies of the frontal sinuses and impaction of teeth; by Dr. M. H. Cryer, Philadelphia, Pa. 13824–13831, a series of specimens showing the results of experimental surgery on dogs, especially by anastomosis of stomach and intestines; by Dr. H. H. Kerr, Washington, D. C.

Monstrosities and malformations.—Specimen 13790, teratoma weighing 4 pounds, removed from the superficial fascia of a dog; by M. P. Smith, doctor of veterinary surgery, Washington, D. C. Specimen 13584, human omphalosite; by Dr. John W. Neal, Monroe, N. C. Specimen 13846, hydro-encephalocele from a Filipino infant 1 month old; by the Board for the Study of Tropical Diseases. Specimen 13844, a syncephalous chicken; by Mr. M. M. Holland, Washington, D. C. Specimen 13576, diprosopus in a dog that lived ten days; was unable to suck; by Mr. S. B. Wright, Washington, D. C. Specimen 13804, human celosoma fetus, at 6 or 7 months; by

Dr. J. L. Hankins, Century, W. Va. Specimen 13840, dipygus parasiticus in a chicken; by Mrs. Raymond Thompson, Washington, D. C. 13930, another somewhat similar specimen; by Mr. Wm. B. Calvert, Washington, D. C. Specimen 13796, solitary kidney from woman, aged 39, who died of pyelo-nephritis; had also syphilis of the liver; see 13797; by Dr. D. S. Lamb.

Ectopic pregnancy.—Specimen 13775, the embryo at about one month; removed by Dr. J. W. Bovee, Washington, D. C. Specimen 13579, removed by Dr. I. S. Stone, Washington, D. C. Specimen 13920, at about three months; woman aged 33, multipara; removed by Maj. F. A. Winter, Medical Corps, U. S. Army.

Shot wounds.—Specimen 13574, shot perforation both ventricles of heart; .30-caliber bullet, new service rifle; range 20 to 30 feet; by Maj. E. L. Munson, Medical Corps, U. S. Army. Specimen 13816, extensive shot laceration of heart; suicide; death instantaneous. Specimen 13583, accidental shot perforation left common iliac artery; .38-caliber bullet; soldier; death in twenty-seven minutes; by Capt. J. W. Grissinger, Medical Corps, U. S. Army. Specimen 13782, shot fracture of skull; soldier; suicide; died four to five days afterwards; by Capt. Henry Page, Medical Corps, U. S. Army. Specimens 13587–13588, shot fracture bones of face and rupture of eye; Filipino; .30-caliber bullet, new service rifle, range about 100 yards; no repair; by First Lieut. H. J. Nichols, Medical Corps, U. S. Army. Specimens 13787–13788, shot injury of vertebræ, spinal cord, and lung; soldier; accidental; died on fourth day; .44-caliber bullet, close range; laminectomy was done; by Capt. C. E. Koerper, Medical Corps, U. S. Army.

Syphilis.—Specimens 13833–13836, bones from Indian burials, presumably precolumbian; by Mr. C. B. Moore, Philadelphia, Pa. Specimen 13800, syphilis of liver; from the Board for the Study of Tropical Diseases. Specimen 13797, syphilitic cirrhosis of liver; woman, age 39; died of pyelo-nephritis; see 13796; by Dr. D. S. Lamb. Specimen 13784, gumma of testicle; removed by Maj. Paul Shillock, Medical Corps, U. S. Army.

Amebic infection.—Specimen 13580, abscess of liver; from the Philippines; no history; by Capt. B. H. Dutcher, Medical Corps, U. S. Army. Specimens 13592–13594, amebic dysentery and abscess of liver; soldier; contracted in the Philippines; by Maj. Wm. H. Arthur, Medical Corps, U. S. Army. Specimens 13794–13795, amebic dysentery in a Filipino, by First Lieut. C. L. Cole, Medical Corps, U. S. Army. Specimens 13813–13814, amebic dysentery and abscess of liver; by Dr. G. T. Tyler, contract surgeon, U. S. Army. Specimen 13929, amebic abscesses of liver; by Capt. E. R. Whitmore, Medical Corps, U. S. Army.

Bacillary dysentery.—Specimen 13926; by Capt. E. R. Whitmore, Medical Corps, U. S. Army. Specimens 13927–13928, from the same case; a soldier; by Capt. P. L. Boyer, Medical Corps, U. S. Army.

Tuberculosis.—Specimen 13578, tuberculous kidney and ureter; removed by Dr. J. W. Bovee, Washington, D. C. Specimen 13819, tuberculous cæcum and peritoneum; woman; anastomosis done because of obstruction of bowel; relief for two years, when obstruction recurred and resection was done by Dr. I. S. Stone, Washington, D. C. Specimen 13922, tubercular ulcer of larynx; case of secondary infection of lungs in a man; by Dr. R. S. Lamb, Washington, D. C. Specimen 13923, tubercular tumor of optic thalamus in a child; by Dr. G. N. Acker, Washington, D. C.

Epidemic cholera.—Specimen 13818, subserous and submucous hemorrhages of intestine; no history; from the Board for the Study of Tropical Diseases.

Typhoid fever.—Specimen 13779, ileum from a boy 7 years old who died of diphtheria; see 13778; by Dr. S. S. Adams, Washington, D. C.

Diphtheria.—Specimen 13778, false membrane on larynx and pharynx; boy 7 years old who also had typhoid fever; see 13779; by Doctor Adams.

Actinomycosis.—Specimen 13792, lower jaw of ox; from the Department of Agriculture.

Animal parasites.—Specimen 13811, larvæ of botfly, from duodenum of horse that was shot; from the United States College of Veterinary Surgeons, Washington, D. C. Specimens 13806–13807, fasciola hepatica of a bovine; from the Board for the Study of Tropical Diseases. Specimen 13808, cysticercus cellulosæ, from the masseter muscle of a pig; from the Board for the Study of Tropical Diseases. Specimens 13776–13777, cysticercus from a hog; by Dr. A. D. Melvin, Bureau of Animal Industry. Specimens 13606 and 13609, wood ticks removed from the ear; by Dr. I. W. Brewer, contract surgeon, U. S. Army. Specimen 13605, screw worms removed from nostril of calf; by Doctor Brewer. Specimen 13925, colon of a monkey showing the œsophagostomum; from the Board for the Study of Tropical Diseases.

Gas bacillus.—Specimens 13821–13823, bacillus ærogenes capsulatus. Specimen 13820, liver, spleen, and kidney showing the cavities; from a case of rupture of parturient uterus; by Dr. W. M. Sprigg, Washington, D. C.

Leukemia.—Specimen 13772, spleen weighing 8 pounds; soldier, age 41; removed post-mortem; by Maj. W. D. Crosby, Medical Corps, U. S. Army.

The nervous system.—Specimen 13791, leptomeningitis in infant 8 days old; by Dr. H. W. Lawson, Washington, D. C. Specimen 13793, old hemorrhages in brain; by First Lieut. C. L. Cole, Medical Corps, U. S. Army. Specimen 13577, sarcoma of cerebellum; girl 8 years old; by Dr. R. S. Lamb, Washington, D. C.

Circulation.—Specimen 13798, old pericarditis, ulcerative endocarditis, hypertrophy of heart, and ulcerative endarteritis; man, age 34; by Dr. D. S. Lamb. Specimen 13832, atheroma of coronary artery; case of angina pectoris; by Capt. B. K. Ashford, Medical Corps, U. S. Army. Specimen 13783, aneurism of abdominal aorta, rupturing into pleural cavity; erosion of vertebræ; man, age 52; by Dr. F. E. Harrington, Washington, D. C. Specimen 13931, heart showing malignant endocarditis; there were also infarctions in the spleen. Specimen 13932, from a soldier; by Maj. Wm. H. Arthur, Medical Corps, U. S. Army.

Digestive organs.—Specimen 13608, adeno-carcinoma of stomach; no symptoms; soldier, age 79; by Maj. W. D. Crosby, Medical Corps, U. S. Army. Two cases of congenital stenosis of pylorus: 13596, infant 22 days old; by Dr. J. F. Moran, Washington, D. C.; 13595, in a youth 17 years old; by Dr. B. G. Pool, Washington, D. C. In each case the microscopical examination showed hypertrophy of the circular muscle of the pylorus. Specimen 13809, ulcer of duodenum; fatal hemorrhage; man, age 42; by Doctor Moran. Specimen 13582, carcinoma of liver; woman, age 29, who had also a tumor, apparently primary, in the sigmoid flexure; by Dr. R. W. Baker, Washington, D. C. Specimen 13843, gall bladder full of calculi; woman, age 32; cholecystectomy; by Dr. I. S. Stone, Washington, D. C. Specimen 13589, endotheliomatous cyst of greater omentum; woman, age 50; removed by Dr. E. M. Hasbrouck, Washington, D. C.

Generative organs.—Specimen 13820, rupture of parturient uterus; gas bacillus cavities in liver, spleen, and kidneys; see 13821–13823; by Dr. W. M. Sprigg, Washington, D. C. Specimen 13815, fibroids of uterus with pregnancy; ovum about two months; removed by Dr. I. S. Stone, Washington, D. C. Specimen 13771, procident uterus; woman, age 56; had been troubled with it fifteen years; removed by Dr. J. W. Bovee, Washington, D. C. Specimen 13780, blood clots passed by a woman, age 30, who had uterine fibroids and was being treated by the "Viavi" method; the masses were supposed to be parts of the tumors, but are only blood clots; by Dr. D. S. Lamb. Specimen 13781, cyst of ovary; removed from girl, 6 years old; by First Lieut. R. C. Loving, Medical Corps, U. S. Army. Specimen 13773, cyst of ovary; woman, age 55; duration, six years; twisted pedicle; removed by Dr. J. W. Bovee, Washington, D. C. Specimen 13604, carcinomatous cyst of ovary; woman, age 35; removed by Doctor Bovee. Specimen 13597, two ovarian cysts removed from a Filipino girl, age 18; the uterus was infantile; by Capt. F. T. Woodbury, Medical Corps, U. S. Army.

Respiratory system.—Specimen 13785, œdema of larynx; woman, age 26; general œdema apparently due to acute congestion of kidneys; by Dr. D. S. Lamb.

Bones.—Specimen 13786, osteitis deformans; man, age 68; the specimen is the calvarium, which weighs 28½ ounces; all the long bones were similarly affected; by Dr. Jesse Ramsburgh, Washington, D. C.

Integument.—Specimen 13586, encephaloid carcinoma of mammary gland; removed from a Moro woman; by Maj. F. A. Winter, Medical Corps, U. S. Army. Specimen 13607, lipoma weighing over 7 pounds, removed from subcutaneous tissue of groin of soldier, age 48; by Maj. W. D. Crosby, Medical Corps, U. S. Army.

Of the miscellaneous section, specimen 3117 is a "Simonis" combined cycle ambulance and litter; 3151, siphon filter devised by Maj. Carl R. Darnall, Medical Corps, U. S. Army; 3156, a camagon or ebony wardrobe from the Philippines; 3164, a stone ball made by the Greek women from the marble of the Parthenon at Athens and thrown from the Acropolis when it was besieged by the Turks; and 3165, old French sword of the sixth to eighth centuries, called a scramasax, found at Flomborn, Hesse, Germany; 3181–3185, a series of models illustrating sewage purification, consisting of a Fiddian distributer; Mather & Platt's sprinkler; Adams's sludge tank and contact beds; the Hamburg septic tank trickling filter; and a section of Dunbar's model filtration bed; donated by Professor Doctor Dunbar, Hygienic Institute, Hamburg, Germany.

LIBRARY OF THE SURGEON-GENERAL'S OFFICE.

The following table shows the additions made to the library during the fiscal year 1907–8:

Description.	On hand June 30, 1907.	Added during fiscal year.	Total June 30, 1908.
	Volumes.	*Volumes.*	*Volumes.*
Medical journals	50,018	1,228	51,246
Medical transactions	8,000	214	8,214
Bound theses	2,544		2,544
Bound pamphlets	2,876	10	2,886
Other medical books	98,857	1,595	100,452
Total	162,295	3,047	165,342
Medical theses	76,380	2,214	78,594
Medical pamphlets	209,553	3,199	212,752
Total	285,933	5,413	291,346

There were presented to the library during the year 823 books and 4,753 pamphlets and journals.

Volume XIII, second series, of the Index Catalogue, will be ready for distribution at the usual time. The manuscript for Volume XIV is in course of preparation.

ARTIFICIAL LIMBS.

Under the laws relating to artificial limbs, apparatus, or commutation therefor, orders were given on manufacturers for 27 legs, 2 arms, and 1 foot, and commutation certificates were issued for 155 cases amputated leg, 74 amputated arm, 8 amputated foot, and for 1,631 cases of loss of use of a limb.

Under the act of June 17, 1870, and subsequent amendments thereto, 23,415 disabled soldiers and sailors have been furnished artificial limbs or apparatus, or have received commutation in money as follows:

Total number benefited to June 30, 1908, 23,415; died, 11,188; dropped from rolls, 592; rejected after one or more payments, 567; remaining on rolls at the end of the fiscal year, 11,065.

It is estimated that the sum of $132,000 will be required to pay the claims coming due during the fiscal year ending June 30, 1910.

One hundred and fifty-six appliances were issued during the fiscal year and 594 trusses were furnished and fitted.

CONCLUSION.

This report is the last which will be signed by the present Surgeon-General, on account of his retirement for age during the present fiscal year, after an incumbency of six years and four months. It seems advisable, therefore, that some statement be made of the policy pursued by his administration and the results which have been accomplished.

It is a matter of common knowledge that the Spanish war found the medical department of the army quite inadequately equipped, both in personnel and material, to meet its obligations, and, in spite of much excellent work accomplished with the inadequate means at

hand, it was severely criticised. It was determined, therefore, to make a careful study of the grounds for such criticism, to separate that which was well founded from that which was captious and uninformed, and to make systematic efforts to remedy the defects discovered. Where legislative action was required it was determined to make an energetic and sustained effort to secure it from Congress. Fortunately the materials were at hand for such a study. President McKinley, at the close of the Spanish war, appointed a commission to study its conduct and to make recommendations with a view of correcting defects known to exist in the military organization. This commission, commonly known from the name of its president as the "Dodge Commission," gave special attention to the investigation of the medical department and published in its report a large mass of testimony from every available source concerning it. The conclusions of the commission were accepted as established facts, and its recommendations as an official and authorized statement of the future policy of the medical department. Although the deficiencies noted have been almost wholly corrected, the conclusions and findings of the commission are so important as to justify repetition here. They are as follows:

"*Conclusions:* To sum up, in brief, the evidence submitted shows:

1. That at the outbreak of the war the medical department was, in men and materials, altogether unprepared to meet the necessities of the army called out.

2. That as a result of the action through a generation of contracted and contracting methods of administration, it was impossible for the department to operate largely, freely, and without undue regard to cost.

3. That in the absence of a special corps of inspectors and the apparent infrequency of the inspections by chief surgeons, and of official reports of the state of things in camps and hospitals, there was not such investigation of the sanitary conditions of the army as is the first duty imposed upon the department by the regulations.

4. That the nursing force during the months of May, June, and July was neither ample nor efficient, reasons for which may be found in the lack of a proper volunteer hospital corps, due to the failure of Congress to authorize its establishment, and to the nonrecognition in the beginning of the value of women nurses and the extent to which their services could be secured.

5. That the demand made upon the resources of the department in the care of the sick and wounded was very much greater than had been anticipated, and consequently, in like proportion, these demands were imperfectly met.

6. That powerless as the department was to have supplies transferred from point to point, except through the intermediation of the quartermaster's department, it was seriously crippled in its efforts to fulfill the regulation duty of furnishing all medical and hospital supplies.

7. That the shortcomings in administration and operation may justly be attributed in large measure to the hurry and confusion incident to the assembling of an army of untrained officers and men, ten times larger than before, for which no preparation in advance had been or could be made because of existing rules and regulations.

8. That notwithstanding all the manifest errors of omission rather than commission, a vast deal of good work was done by medical officers, high and low, regular and volunteer, and there were unusually few deaths among the wounded and the sick."

A careful analytical study was made of these conclusions, of the seven recommendations, and of the mass of evidence upon which they were based, as well as other reports, criticisms, suggestions, etc., on file. The following are the recommendations of the commission:

"What is needed by the medical department in the future is—

1. A larger force of commissioned medical officers."

In these seven words are stated the first and most essential need of the department, and by far the most difficult to supply. A trained, disciplined, and efficient personnel can not be improvised, in spite of the popular impression to the contrary. It must be brought up with good traditions and esprit de corps which ignores all personal considerations and looks only to the good of the service and the sacred responsibilities intrusted to it. It must be carefully specialized in its training to meet the peculiar needs of military service, and yet broad enough to cope with new conditions and great responsibilities. Therefore, this first recommendation has been the most difficult of execution and the last of all to reach accomplishment in the bill signed by the President on April 23 of this year.

So little was the advice of the commission heeded at the time of the reorganization of the army subsequent to the Spanish war that instead of giving the new enlarged army a sufficient number of medical officers to do the work of the department the increase was so small that it was actually a proportionate reduction, and a large number of civilian physicians had to be employed under contract to make up the deficiency. This device served as a crutch which enabled the organization to go indeed, but which gave no permanent strength or any prospect of successful expansion in time of war. A carefully prepared statement of the needs of the department was laid before Mr. Root, then Secretary of War, on December 24, 1903, and received his cordial indorsement before his retirement from that office a month later. It also received the cordial support of his successor, Secretary Taft, and enlisted to such an extent the interest of the President that in January, 1905, he sent a special message to Congress concerning it. This act, besides increasing the corps by 32 per cent, corrected the disproportionate number in the lower grades which had been introduced into the organization in 1901, and which had destroyed the attractiveness of the medical service by greatly impairing the prospect of promotion. It also introduced a feature of promotion by elimination for the administrative grades of colonel and lieutenant-colonel, by requiring that majors be examined for promotion. It also substituted a medical reserve corps, members of which are commissioned after examination, but called into service only when needed, for the objectionable device of employing civilian physicians under contract who, not being commissioned officers, occupy a position without proper dignity or authority.

"2. Authority to establish in time of war a proper volunteer hospital corps."

This has reference to an unfortunate omission, probably of inadvertence, in the legislation at the beginning of the Spanish war,

authorizing the raising of a volunteer army for which no volunteer hospital corps was provided. The unfortunate results of this omission remain a painful memory to those having experience with the field hospitals of that war. An ample and well organized hospital corps is a feature of the organization prepared by the General Staff as a model for the next volunteer army. There is little danger that this necessary feature will be omitted from any future legislation authorizing the creation of such a force.

"3. A reserve corps of selected trained women nurses ready to serve whenever necessity shall arise, but under ordinary circumstances owing no duty to the War Department, except to report residence at determined intervals."

This has been carried out by the organization of the Army Nurses Reserve Corps, which was created in 1901 along the exact lines proposed.

"4. A year's supply for an army of at least four times the actual strength, of all such medicines, hospital furniture and stores as are not materially damaged by keeping, to be held constantly on hand in the medical supply depots."

A study of this question and of the evidence as to what was lacking in the way of supplies in the hospitals of the Volunteer Army made it evident that the majority of articles of medical supply can always be obtained in the markets of the United States in sufficient quantity, and the shortage at the time of the Spanish war was in the main a defect of transportation and distribution. Every article on the supply table was looked up to determine the available supply procurable immediately or within thirty days, and an estimate made of the amount needed for armies of various sizes. The sources of supply were also investigated. Medical and hospital supplies were thus divided into two classes, of which the first and largest could always be obtained in the United States in sufficient amount, they being the drugs and supplies habitually used by the medical profession. The second list comprised those articles—chiefly field chests and medical supplies and equipment for field use—which are intended to meet special requirements and are not kept in stock by the trade. Of these a reserve supply for war was evidently needed, it having been found that the field chests ordered at the beginning of the Spanish-American war were not delivered by the contractors until after its close.

A beginning had already been made to collect field equipment, and a depot had been established in the basement of the Army Medical Museum and Library building. This depot has been moved into a more commodious and suitable building and the reserve supply has been year by year enlarged and amplified. Medical storehouses for field equipment have also been secured at the old powder depot at St. Louis, where a second field depot has been established. A store of field equipment has been assembled at the medical supply depot at San Francisco and at Manila. A systematic plan for the assembling of field hospitals, complete with ordnance and all quartermaster's supplies, except transportation, but including tentage, has been instituted. These are complete with the exception of a few articles, such as rubber goods, which deteriorate from storage. They can be supplied and the hospitals be ready for shipment in twenty-four hours. Two base hospitals, 10 stationary hospitals, 38 field

hospitals, 78 regimental hospitals, and 7 supply depots are now assembled or in process of assembly at Washington, St. Louis, San Francisco, and Manila.

The liberality of the present Congress in appropriating a fifth of a million dollars for this special purpose will very considerably increase the provision of reserve field equipments.

"5. The charge of transportation to such an extent as will secure prompt shipment and ready delivery of all medical supplies."

This touches the most vital and the most difficult question of military administration. The quartermaster's department is charged with the transportation of supplies of all sorts and for all branches of the army, except such as are carried along with troops in the field. For these the medical department has its own transportation provided, but for transportation from depots and sources of supply, by common carriers, the problem is an administrative one which would be probably no nearer solution if the medical department should be given its own transportation department. The medical department has now, by paragraph 638, F. S. R., entire control of the wagons, trains, vessels, etc., turned over to it and it has the privilege of shipping by express when this mode of rapid transportation is deemed necessary and is feasible. It being recognized that it is impossible for the medical department and other staff departments to have each a distinct quartermaster service of its own, provision has been made in the Field Service Regulations for the appointment of acting quartermasters for medical organizations and for the detail of representatives of the medical department to accompany shipments when necessary en route. In the extensive shipments made by this department to San Francisco at the time of the earthquake and fire in that city, the medical supplies sent in carload lots or by special trains were accompanied by hospital corps detachments, and in the case of trains of medical supplies, by medical officers, and all of these arrived with the utmost promptness. In the case of medical supply trains the officers in command were able to pick up en route a large number of cars of quartermaster's supplies found on the sidings by the way, which were also delivered promptly in San Francisco. It is believed that these provisions give as much autonomy in the question of transportation of supplies as is practicable or necessary and that the medical department will, like other staff and supply departments have to look for any further relief to improvements in the organization and methods of the transportation branch of the quartermaster's department upon which they must all depend.

"6. The simplification of administrative 'paper work,' so that medical officers may be able to more thoroughly discharge their sanitary and strictly medical duties."

The whole matter of reports, returns, etc., required of medical officers in garrison or in the field has been made the subject of careful study to reduce to the minimum permitted by the law and Treasury regulations, the "red tape" which is so burdensome to the volunteer medical officer.

An extension of the card system to the posts has saved the recopying of the reports of sick and wounded in this office and made possible a considerable reduction of clerical force.

A careful study extending over nine months was made of the organization of the Surgeon-General's office with a view of remedying certain

administrative defects which had long been evident. It was found that the work was neither evenly nor logically distributed among the assistants and a vast amount of detail was brought to the chief of the bureau which could be properly and logically transacted by his assistants. This interfered with proper attention to larger affairs and in time of war caused a congestion at the top which was fatal to administrative efficiency. A reorganization of the office was made with a redistribution of the work among the several divisions, which has much facilitated the transaction of current business and made it readily possible to expand the office in war without any rearrangement or confusion, leaving the Surgeon-General free from routine matters or administrative details, so that his time may be given to large affairs. Incidentally to this reorganization rosters of all medical officers have been made out so as to show their stations from entry into service and their proper order for foreign service. It is now possible as a rule to notify officers several months in advance that their turn for foreign service has arrived, and the number of changes of station in the United States has, by foreseeing moves, been constantly reduced with economy alike to the Government and the medical officer.

"7. The securing of such legislation as will authorize all surgeons in medical charge of troops, hospitals, transports, trains, and independent commands to draw from the subsistence department funds for the purchase of such articles of diet as may be necessary to the proper treatment of soldiers too sick to use the army ration. This is to take the place of all commutation of rations to the sick now authorized. Convalescent soldiers traveling on furlough should be furnished transportation, sleeping berths or staterooms, and $1.50 per diem for subsistence in lieu of rations, the soldier not to be held accountable or chargeable for this amount."

The recommendations under this head have been carried out practically as suggested by the commission. It is seen, therefore, that in so far as the Dodge Commission was able to formulate the defects existing in the medical department, these have been corrected. The work of improvement has not, however, been limited to these recommendations.

Medical supplies.—The nonexpendable medical supplies on hand were to a very large extent obsolete or unsatisfactory. Many of the instruments in the post hospitals had come down from the time of the civil war and the preantiseptic era, while the field equipment was necessarily purchased in haste wherever it could be found at the time of the Spanish war and was defective in quality and design. A study of this equipment was made, and all of it which was obsolete or unsuitable was condemned.

The hospital corps has been reorganized by the act approved March 3, 1903, and a thorough system of instruction for its members of all grades put in operation. The result has been a very gratifying increase in its efficiency.

At the maneuver camps of 1906, and upon the recommendation of this office sanitary squads were first organized and used to perform all the sanitary work of the camp, such as the purification of water, the disposal of wastes, destruction of mosquitoes, etc. These squads were composed of hospital corps men and hired civilians working under the direction of the sanitary inspector; their work was most satisfactory both to line and staff, and it is believed that this organi-

zation marks the beginning of the use of the medical department for more extended executive sanitary functions.

The war with Spain and the wars in South Africa and Manchuria attracted general attention to the importance of diffusing a knowledge of sanitation, not only in the medical staff, but among officers of the line as well, and accordingly by General Orders No. 176, October 21, 1905, a department of military hygiene was established at the United States Military Academy, the senior medical officer at the academy being made the head of the department and a member of the academic board.

The method of examination of candidates for admission to the medical corps has been changed so as to require their graduation at the Army Medical School before being commissioned. In this way an eight months' period of probation is obtained which results in the discovery of moral or other defects not brought out by a single examination and the saving to the service of some excellent candidates who have an opportunity to make up small defects in education or preparation.

Appropriations have been obtained from Congress for the purchase of land and construction of a general hospital at Washington, D. C. This has long been needed and was recommended by Surgeon-General Hammond in 1862. An appropriation has also been obtained for the purchase of much needed book stacks at the Surgeon-General's library, whereby this great national institution has been enabled to continue its invaluable services to the medical profession of the country.

It has been the policy of the office to encourage in every way important scientific work and original investigation and to assist other departments of the Government, although at some sacrifice on account of the shortage of medical officers. For example, Capt. B. K. Ashford was for two years loaned to the insular government of Porto Rico to carry out his beneficent and very successful campaign against tropical "anemia" due to hook-worm disease. Colonel Gorgas and five other medical officers have been detailed to carry out the sanitary regeneration of the Isthmus of Panama. The purchase of their sanitary supplies has been taken over and rescued from confusion and delay. In like manner the purchase of medical supplies for the Department of Commerce and Labor has been undertaken at their request. Maj. J. R. Kean has for nearly two years been on duty on the staff of the provisional governor of Cuba, exercising supervisory control over the sanitary department of that island, with four other medical officers detailed to assist him. Cordial relations have been established with the organized militia, and all requests for medical equipment and supplies from them and from the navy have been promptly complied with.

Toward the chief surgeons a policy of decentralization has been steadily pursued, and as regards the medical corps at large the necessity for good, earnest professional work has been emphasized, and a high standard maintained by stiffening the examinations for promotion, which it is the desire of this office to extend to the higher grades.

A new manual has been prepared in which the dominant idea has been not only to meet the needs of to-day, but also the exigencies of war and the requirements of field service, making all the details of administration plain to the untrained volunteer surgeon.

Successful efforts have been made to come into close touch with the medical services of the organized militia to encourage them to regard themselves as the reserve of the regular medical department, to look to it for supplies, advice, and assistance, and in every way to promote a feeling of solidarity. At the same time no opportunity has been neglected to cultivate the sympathetic interest of the medical profession of the country in the special work of the medical corps, as they must ever constitute the great reserve which must supply the medical establishment of the nation in arms.

In conclusion, attention is invited to the fact that there are at present three officers entitled Surgeon-General and stationed in Washington. Of these one belongs to the Army, one to the Navy, and one to the Treasury Department. This triplication of a title leads in time of peace to confusion and delay in that correspondence and telegrams are not infrequently misdirected or wrongfully delivered, and correspondents are at a loss to know the proper department to address.

In time of war serious, even grave, inconvenience is morally certain to arise from delay, from important or confidential business passing through those for whom it was not intended, and from other manifest complications, to the decided detriment of the public service.

As the title "Surgeon-General" pertained exclusively to this office for many years (from May, 1818, to March, 1871, when it was also given to the Navy), it is recommended that legislation be sought restricting that title to the head of the medical department of the Army, to whom it belongs by right of longest possession and because it is properly only a military title.

The following table, referred to on page 28 of this report, shows in detail the surgical operations reported by medical officers as having been performed by them on officers and enlisted men of the army during the calendar year 1907:

Surgical operations performed on American troops.

Operation.	Disease or injury.	Cases.	Result.				Anesthetic.					
			Successful.	Partially successful.	Failure.	Died.	Chloroform.	Ether	Chloroform and ether.	Spinal.	Local.	None.
	Eye.											
Extirpation of eyeball	Rupture of eyeball	3	3				2	1				
	Penetrating wound	1	1					1				
	Penetrating gunshot wound	1	1					1				
	Destruction of eyeball	1	1				1					
	Ophthalmia, chronic gonorrheal.	2	2				2					
Excision of protruding portion of iris.	Wound, incised, of eye	1		1							1	
Expression with Knapp's forceps.	Trachoma	13	13					12			1	
Slitting open lower canaliculus.	Dacryocystitis, chronic, with stricture.	1	1								1	
Dilatation	Stricture of nasal duct	6	6								6	
Excision 17 Dissection and transplantation 1	Pterygium	18	17	1			1				17	
Incision and curettage	Chalazion	9	9								9	
Extraction	Foreign body in cornea	12	12								12	
Excision	Lipoma of eyelid	1	1								1	
Do	Cyst of eyelid	1	1								1	
Incision	Abscess of eyelid	1	1								1	
	Ear.											
Mastoidotomy	Empyema of mastoid cells	1			1		1					
Mastoidotomy and curettage.	Mastoiditis	3	3				1	2				
Ossiculectomy	Otitis media, chronic suppurative.	2	2					2				
Paracentesis	Otitis media, acute	13	11	2							12	1
Excision	Polypus, aural	1	1								1	
Suturing of helix	Laceration of ear	1	1									1
Incision	Abscess of external auditory canal.	3	3				1				2	
	Nose.											
Trephining	Empyema of frontal sinus	1	1				1					
Drilling into antrum	Empyema antrum of Highmore.	1	1								1	
Paraffin injection	Saddle-nose deformity	1	1								1	
Gleason's operation 13 Punch operation 1 Submucous resection 22	Deviation of septum	36	36				1				35	
Submucous resection	Deflection of septum	5	5								5	
Excision with snare 13 Excision with forceps 5 Excision with scissors 2 Chromic acid 11 Actual cautery 1	Hypertrophy of turbinate bodies.	32	32					1			27	4
Removal	Double anterior synechiæ of nares.	1	1								1	
Avulsion, 1; excision with snare, 29.	Polypus	30	30								30	
Excision	Nasal spur	16	16								16	
Do	Septal shelf	8	8								8	
Incision and drainage	Abscess, bridge of nose	1	1					1				

Surgical operations performed on American troops—Continued.

Operation.	Disease or injury.	Cases.	Result.				Anesthetic.					
			Successful.	Partially successful.	Failure.	Died.	Chloroform.	Ether.	Chloroform and ether.	Spinal.	Local.	None.
	Mouth, pharynx, and esophagus.											
Excision	Epithelioma of lower lip	1	1				1					
Hagedorn's operation	Harelip	1	1					1				
Tonsillectomy	Tonsillitis	93	93					13			53	27
Excision, 85; excision and curettage, 13.	Adenoids, post-nasal and pharyngeal.	98	98					20			55	23
Curettage	Inflammation of pharyngeal tonsil.	2	2								2	
	Neck and thorax.											
Thyroidectomy	Exophthalmic goiter	1	1					1				
	Goiter	2	1	1				1			1	
Thoracotomy 4 Thoracotomy with resection of rib. 3	Empyema	7	7				3	3	1			
Exploratory thoracotomy	Abscess of lung	1			1		1					
Aspiration	Pleurisy	13	9		4		1		1		4	7
Exploratory thoracotomy	Gunshot wound of chest	1			1			1				
	Abdomen.											
Exploratory celiotomy	Lympho-sarcoma of stomach, with mesenteric glandular involvement.	1	1					1				
Gastro-enterostomy	Gastric ulcer, chronic	1	1				1					
Celiotomy and removal of section of tumor for examination.	Cancer of the pancreas	1	1					1				
Celiotomy and division of adhesions.	Intestinal obstruction due to adhesions resulting from former operation for peritonitis.	1				[a] 1	1					
Exploratory celiotomy	Adhesions, post-cholecystitic.	1	1				1					
Do	Peritonitis, general	1				1		1				
Celiotomy	Peritonitis due to perforating ulcer of duodenum.	1				1		1				
Do	Perforating typhoid ulcer	1				1		1				
Suturing of liver and closing of wound.	Stab wound of liver	1				1	1					
Exploratory celiotomy and suturing.	Stab wound of abdomen	1	1					1				
Celiotomy	Incised wound of abdomen	2	1			1	2					
Exploration of peritoneum.	Gunshot wound of abdomen, nonpenetrating.	1	1				1					
Excision of Merkel's diverticulum.	Omphalitis, patulous Merkel's diverticulum.	1	1					1				
Exploratory celiotomy	Sacculated aneurism of abdominal aorta.	1	1					1				
Do	Rupture of large chyle vessel.	1	1					1				
Excision of tract	Fecal fistula, cecal	1	1					1				
Exploratory laparotomy and removal of section of tumor for examination.	Sarcomatous degeneration of fibroma, right iliac fossa.	1			1			1				
Thoracotomy and rib resection 11 Celiotomy and drainage 15 Aspiration 4	Abscess of liver	30	25		2	3	9	21				
Exploratory celiotomy	Suspected abscess of liver	3	1		2			3				
Do	Hepato-pleural abscess, amebic.	1	1					1				
Exploratory puncture of liver.	Abscess of liver, and biliary fistula.	1			1					1		
Exploratory celiotomy with aspiration.	Hepatitis, chronic	2	2					2				

[a] Urgent symptoms relieved, but patient died 12 days later of inanition.

Surgical operations performed on American troops—Continued.

Operation.	Disease or injury.	Cases.	Result.				Anesthetic.					
			Successful.	Partially successful.	Failure.	Died.	Chloroform.	Ether.	Chloroform and ether.	Spinal.	Local.	None.
	Abdomen—Continued.											
Cholecystostomy, 2; cholecystotomy, 4.	Cholecystitis	6	5			1	3	3				
Cholecystotomy and removal of stones.	Gallstones	2	2					2				
Exploratory celiotomy	Suspected gallstones	1	1				1					
Appendicostomy	Dysentery, chronic	1	1					1				
Appendectomy 129 Laparotomy and drainage 12 Exploratory laparotomy 1	Appendicitis	142	139	1		[a] 2	40	100	2			
Exploratory laparotomy and appendectomy.	Suspected appendicitis, chronic.	1			1		1					
Abscess opened and drained through abdomen and lower border of chest, with resection of rib.	Abscess, subphrenic, complicating suppurative appendicitis.	1			1			1				
Laparotomy, right and left border of rectus.	Peritonitis, general, due to rupture of infected appendix.	1	1					1				
Laparotomy	Perityphlitis	1	1				1					
Exploratory laparotomy	Abscess, peritoneal	2	2				1	1				
Paracentesis	Ascites	2	2									2
Bassini's operation 123 Bassini's modified operation 2 Bloodgood's modification of Bassini's operation 1 Halstead's operation. 1 Johns Hopkins' operation 4 Ferguson's operation. 2 Laparotomy and Bassini's operation 1 Dissection of old scar and closing of enlarged internal ring with kangaroo suture 1 Operation not stated. 7	Hernia, inguinal	[b] 142	142				43	93	3	3		
Incision 3 inches long over seat of hernia, and reduction.	Hernia, femoral strangulated.	1	1				1					
Excision of sac; wound closed with layer sutures 1 Excision of sac; wound closed with mattress stitches 1 Resection of scar; wound closed with layer sutures 2 Bassini's operation 1 Mayo's operation 1 Operation not stated 2	Hernia, ventral	[c] 8	8				1	7				
	Anus and rectum.											
Excision of redundant tissue 2 Cautery 1	Prolapse of rectum	3	3				1	2				
Actual cautery	Ulcer of rectum	1	1							1		
Removal with forceps	Polypi of rectum	1	1							1		
Curettage and packing 6 Incision and curettage 3 Incision and drainage. 26	Ischio-rectal abscess	35	34		1		2	7			13	13

[a] One death resulted from acute Bright's disease 21 days after operation.
[b] One operation for strangulated hernia, and 1 for recurrent hernia.
[c] Three of these followed the operation for appendicitis.

Surgical operations performed on American troops—Continued.

Operation.	Disease or injury.	Cases.	Result.				Anesthetic.					
			Successful.	Partially successful.	Failure.	Died.	Chloroform.	Ether.	Chloroform and ether.	Spinal.	Local.	None.
	Anus and rectum—Con.											
Excision of fistulous tract 1 Incision and drainage. 2 Dilatation and irrigation..	Peri-rectal abscess	3	3							1		2
	Proctitis	1	1				1					
Excision 24 Excision and curettage 6 Excision and cautery.. 5 Curettage of tract 3 Dilatation 1	Fistula in ano	39	38		1		4	11		5	18	1
Dilatation and cautery. 1 Curettage 1	Fissure of anus	2	2					1			1	
Incision and curettage	Abscess of anus	3	3				1	1			1	
Ligation and excision, 30; excision, 63; excision and suture, 3; excision and cautery, 1; ligation and cautery, 1; thermocautery, 2; clamp and cautery, 78; ligation, 9; incision and curettage, 3; incision and removal of clot, 8; Whitehead's operation, 9; Allingham's operation, 5.	Hemorrhoids, external 100 Hemorrhoids, internal 45 Hemorrhoids, mixed.. 28 Hemorrhoids, site not stated 39	212	211	1			51	90	10	10	48	3
Division of muscle and dilatation.	Contracture of corrugator cutis ani following operation for fistula.	1	1					1				
Excision	Papillomata around anus..	2	2				1	1				
Do 1 Cautery 1	Condylomata around anus.	2	2					1	1			
Incision and packing	Pilo-nidal sinus	1	1									1
	Genito-urinary system.											
Orchidectomy	Tuberculosis of testicle	3	3				2	1				
Do	Orchitis, chronic	1	1				1					
Do	Undescended testicle	3	3					3				
Do	Atrophy of testicle, with pain.	1	1				1					
Orchidectomy and removal of scar tissue.	Atrophy of testicle and painful scar from former operation for varicocele.	1	1				1					
Curettage	Tuberculosis of testicle	1	1				1					
Excision of epididymis. 1 Epididymotomy 5	Epididymitis	6	5		1		1	1			4	
Excision, supra pubic. 75 Excision, low 6 Bennett's, high 3 Howse's 2 Excision, site not stated 48 Doyen's operation 1 Von Bergmann's operation 3 Volkman's operation.. 4 Excision of sac 16 Partial excision of sac.. 1 Inversion of sac 3 Paracentesis 20	Varicocele	136	136				35	77	4		20	
	Hydrocele	48	48				6	30		1	11	
Laparotomy transperitoneal with attempt to remove tumor.	Angio-sarcoma of kidney	1			1			1				
Nephrectomy	Multiple renal calculi and uropyonephrosis with almost complete destruction of kidney tissue.	1	1					1				
Nephrectomy, 1; nephrotomy, 1.	Pyonephrosis	2	2					2				
Exploratory lumbar incision.	Suspected pyonephrosis; diagnosis not verified.	1	1					1				
Nephrotomy	Tuberculosis of kidney	1				1		1				
Do	Pyelonephritis	1	1				1					

Surgical operations performed on American troops—Continued.

Operation.	Disease or injury.	Cases.	Result.				Anesthetic.					
			Successful.	Partially successful.	Failure.	Died.	Chloroform.	Ether.	Chloroform and ether.	Spinal.	Local.	None.
	Genito-urinary system—Con.											
Nephropexy	Floating kidney	2	2					2				
Edebohl's incision	Abscess, renal	1			1			1				
Incision and drainage	Abscess, perinephritic	1	1					1				
Do	Abscess, prostatic	2	2				1				1	
Incision and curettage	Abscess, periurethral and perineal sinus.	1		1			1					
Incision and drainage	Abscess, Cowper's gland	2	1	1							1	1
Plastic	Urethro-perineal fistula	1	1								1	
Excision and curettage	Suppurating perineal sinus.	1	1					1				
Urethrotomy external	Impacted calculus	1	1					1				
Do 1 Urethrotomy, internal 7	Stricture of urethra	8	7			1	2	1			4	1
Meatotomy	Stricture of meatus	6	6								6	
Circumcision	Phimosis, elongated prepuce, and redundant prepuce.	300	299		1		18	10	1		271	
Do	Balanitis, chancre, chancroid, and venereal warts.	43	43				4	4			35	
Plastic	Chancroid phagedenic	1	1								1	
Retrenchment	Redundant scrotum	3	3					2			1	
	Vascular system.											
Ligation	Severed external plantar artery.	1	1				1					
Do	Severed palmar arch; not stated whether deep or superficial.	1	1				1					
Excision, 28; multiple ligation and excision, 8.	Varicose veins	36	36				9	17	5		5	
Incision and drainage	Suppurative thrombophlebitis, internal saphenous.	1	1								1	
	Nervous system.											
Elevation of depressed bone, dissection of scar from dura, and puncture of dura to relieve intracranial pressure.	Insanity, cyclic	1	1					1				
Trephining	Epilepsy	1	1				1					
Incision, exploratory	Contracted scar involving median nerve.	1			1			1				
Excision of nerve, dorsum of foot.	Intractable neuralgia in distribution of musculo-cutaneous nerve.	1			1			1				
Morton's operation	Metatarsalgia	3	3					3				
	Skin and cellular tissues.											
Abscission of skin	Creeping eruption, probably due to larvæ of botfly.	1			1						1	
Excision of tubercles	Lesion of yaws	1	1								1	
Excision	Congenital growth	1	1					1				
Do	Nevus	1	1								1	
Do	Poro-keratosis	1	1				1					
Do	Keloid	2	1		1			2				
Do	Scar (three, painful)	5	4	1			1				4	
Do	Chancre, dorsum of hand	1	1								1	
Do	Pigmented mole	1	1								1	
Curettage	Indolent ulcer	1	1					1				
Do	Sinus	6	6				2	1			3	
Incision and drainage	Infected wound of hand	2	2					1			1	
Multiple incision 1 Incision and curettage 4 Incision and drainage 16 Incision and curettage 9 Incision and drainage 215 Incision, exploratory 1	Cellulitis	21	20		1		7	2	1		8	3
	Abscess	225	223	2			15	15	1		129	65

Surgical operations performed on American troops—Continued.

Operation.	Disease or injury.	Cases.	Result.			Anesthetic.					
			Successful.	Partially successful.	Failure. Died.	Chloroform.	Ether.	Chloroform and ether.	Spinal.	Local.	None.
	Lymphatic system.										
Adenectomy..... 278 Incision and drainage. 292 Incision and curettage 67 Curettage and injection..... 3	Adenitis, inguinal, venereal..... 407 Adenitis, inguinal nonvenereal..... 66 Adenitis, inguinal, traumatic..... 3 Adenitis, inguinal, nature not stated..... 164	640	638	2		161	124	3		280	72
Excision of inguinal glands	Disease not stated.....	3	3			3					
Incision and curettage....	Adenitis, cervical.....	2	2			2					
Adenectomy.....	Adenitis, cervical, tubercular.	9	8	1		4	3	1		1	
Do.....	Adenitis, post auricular, 1; axillary, 1; and arm, 1.	3	3			1	1			1	
Excision.....	Lymphadenitis suppurative	1	1				1				
Do.....	Lymph nodes, tubercular...	2	1	1		2					
	Muscles, tendons, fasciæ, ligaments, and bursæ.										
Excision of tendon.....	Rupture of deltoid muscle..	1	1							1	
Layer suturing of muscles.	Lacerated wound of forearm	1	1			1					
Dissection and suturing of severed tendons.	Lacerated wound, severing tendons of flexor sublimis digitorum, supplying little and ring fingers.	1	1				1				
Incision and breaking up of adhesions.	Adhesions, extensor tendons hand.	1	1				1				
Tenorrhaphy.....	Lacerated wound of hand..	2	2			2					
Suturing of latissimus dorsi.	Stab wound of back.....	1	1				1				
Incision and drainage.....	Abscess of iliac fascia.....	1	1			1					
Suturing.....	Severed tendon of rectus femoris.	1	1			1					
Do.....	Severed tendo-Achilles.....	1	1			1					
Tenotomy.....	Contraction flexor tendons of toe.	1	1							1	
Do.....	Hammer toe.....	1	1				1				
Excision, 3; Keller's operation, 2.	Bunion.....	5	5			2	3				
Aspiration, 1; incision and drainage, 7.	Bursitis.....	8	8				1			5	2
Incision and drainage.....	Tendosynovitis.....	1	1				1				
Subcutaneous evacuation, 1; excision, 4.	Ganglion.....	5	5							5	
	Bones.										
Trephining.....	Fracture of skull (one by gunshot).	2			2	1	1				
Wiring of fragments.....	Fracture of inferior maxilla.	5	4	1		1	3			1	
Removal of dead bone, and curettage.	Necrosis of inferior maxilla.	4	4			4					
Laminectomy.....	Gunshot wound, site not stated.	1			1	1					
Section and wiring..... 3 Removal of wire suture. 1 Resetting and wiring.....	Fracture of clavicle (one, old).	4	4			4					
	Fracture compound of olecranon.	2	1	1		1	1				
Removal of fragments, freshening ends of bone, and closing of wound with drainage.	Gunshot wound of elbow...	1	1			1					
Incision and drainage.. 1 Dissection of fistulous tract, removal of loose bone..... 1 Incision and wiring of fragments..... 1	Fracture, compound comminuted, both bones forearm.	3		3			3				

Surgical operations performed on American troops—Continued.

Operation	Disease or injury.	Cases.	Result.			Anesthetic.					
			Successful	Partially successful.	Failure.	Died.	Chloroform.	Ether.	Chloroform and ether.	Spinal.	Local.	None.
	Bones—Continued.											
Incision, exploratory, along outer border of arm and forearm, exposure and removal of section of osteoma for examination.	Traumatic osteoplastic periostitis, lower extremity of humerus and upper extremities of ulna and radius.	1	1					1				
Resetting and wiring	Fracture of radius	1	1				1					
Incision, and suturing with chromic gut.	Fracture, irreducible, metacarpal of thumb.	1	1					1				
Removal of fragments and suturing.	Gunshot wound of hand	1	1					1				
Removal of fragments and suturing of extensor tendons of injured fingers.	Fracture, compound, first phalanges of second and third fingers.	1		1			1					
Excision of corresponding metacarpals.	Gunshot wound resulting in loss of index and middle fingers.	1	1				1					
Exposure of fracture, adjusting and wiring of fragments.	Fracture, simple, irreducible, of femur.	2	1	1				2				
Incision and curettage	Necrosis of femur	1	1					1				
Excision	Osteomata, thigh and leg	1			1			1				
Incision and wiring	Fracture of patella (one, old)	2	2				1	1				
Do	Fracture, ununited, both bones of leg.	1			1		1					
Incision and removal of accessible part of wire.	Pain over seat of old wired fracture of tibia and fibula.	1	1				1					
Wiring of ununited fracture.	Fracture of tibia, lower third (old).	1	1					1				
Incision, exploratory	Gumma, syphilitic, head of fibula.	1	1				1					
Curettage	Osteomyelitis of tarsus	1	1				1					
Osteotomy	Exostosis of metatarsus	1	1					1				
Removal of fragments and closing of wound.	Gunshot wound of great toe	1	1				1					
Incision and curettage. 5 Incision and drainage. 4 Removal of dead bone. 11	Periostitis	9	9				2				6	1
Incision and curettage. 6	Necrosis	17	15	2			10	6		1		
	Joints.											
Wiring of acromio-clavicular articulation.	Dislocation of shoulder joint.	2	2					2				
Shortening of capsular ligament.	Habitual dislocation of shoulder joint.	1		1			1					
Incision, exploratory	Adhesions of shoulder joint following injury.	1	1					1				
Complete excision of joint.	Tubercular arthritis of elbow and tuberculosis of all surrounding tissues.	1			1		1					
Resection, subperiosteal, of joint.	Ankylosis of elbow, following fracture (old).	1			1			1				
Reduction by open method	Irreducible dislocation carpo-metacarpal joint.	1	1					1				
Incision, exploratory	Injury of carpo-metacarpal joint.	1	1								1	
Incision and removal of bullet.	Limitation of motion knee joint caused by lodged 22-caliber bullet (old).	1	1					1				
Lavage of joint, 1; aspiration, 1.	Arthritis, gonorrheal, of knee joint.	2	2								2	
Incision and removal of cartilage.	Floating cartilage of knee joint.	3	3				2	1				

Surgical operations performed on American troops—Continued.

Operation.	Disease or injury.	Cases.	Result.				Anesthetic.					
			Successful.	Partially successful.	Failure.	Died.	Chloroform.	Ether.	Chloroform and ether.	Spinal.	Local.	None.
	Joints—Continued.											
Arthrotomy	Dislocation of ankle and compound fracture of tibia and fibula.	1		1				1				
Incision, exploratory	Arthritis, subacute, of ankle.	1	1				1					
Suture and tightening of ligament.	Relaxed internal ligament of first metatarso-phalangeal joint.	1	1					1				
Incision and division of adhesions.	Stiffness of metatarso-phalangeal joints, both great toes following chronic bursitis and operation for the same.	1			1			1				
Excision of exostosis 3 Partial resection of joint 7 Resection and transplantation of extensor tendon 4	Hallux valgus	14	12		2		9	2	2		1	
	Amputations.											
Amputation at shoulder joint.	Gunshot wound of arm	1	1					1				
Amputation arm, lower third.	Diabetic gangrene	1			1		1					
Amputation forearm, junction of middle and lower thirds, modified circular.	Lacerated wound of hand and forearm.	1	1					1				
Amputation forearm, lower third.	Compound fracture of wrist	1	1					1				
Do	Lacerated wound of hand	1	1					1				
Amputation thigh, lower third.	Compound fracture both bones of leg.	1				[a] 1	1					
Do	Gunshot wound	1				1						1
Amputation thigh, site not stated.	Gas bacillus infection	1	1				1					
Amputation at knee joint	Arteritis obliterans with necrosis of tibia.	1	1					1				
Amputation leg, upper third.	Crushing by cars	1			1		1					
Do	Comminuted fracture of leg.	1	1					1				
Amputation leg, site not stated.	Gas bacillus infection	1			1		1					
Do	Gangrene of foot	1	1					1				
Do	Necrosis, extensive, of os calcis	1	1					1				
Amputation finger	Gunshot wound, 14; other injury, 14; disease, 7; supernumerary, 2; cause not stated, 7.	44	43			[b] 1	22	15			7	
Amputation toe	Injury, 1; hammer toe, 14; cause not stated, 4.	19	18			[c] 1	6	6		1	6	
	Foreign bodies.											
Incision and removal	Bullet, 16; piece of priming, 1; needle, 1; piece of shell, 2; bird shot, 1; foreign body, not stated, 2.	23	20		3		5	7		1	8	2
	Tumors.											
Excision	Adenoma, 1; cystic, 3; dermoid cyst, 3; enchondroma, 1; fibroma, 5; hematoma, 1; hyaloid cyst, 1; lipoma, 5; myoma, 1; papilloma, 4; sebaceous cyst, 38; tumor, nature not stated, 5.	68	67	1			6	10		2	50	

[a] Died of tetanus.
[b] Died of septicemia following infected wound.
[c] Died of tetanus 34 days after receipt of injury.

Surgical operations performed on American troops—Continued.

Operation.	Disease or injury.	Cases.	Result.				Anesthetic.					
			Successful.	Unsuccessful.	Failure.	Died.	Chloroform.	Ether.	Chloroform and ether.	Spinal.	Local.	None.
	Plastic surgery.											
Skin grafting	Cicatricial contraction	2	2				1				1	
	Tropical ulcer	1	1								1	
	Granulating surface	1	1								1	
Dissection of scar, curettage of bone, and transplantation of skin flap to cover.	Indolent ulcer involving os calcis.	1	1							1		
	Miscellaneous.											
Incision, multiple	Streptococcus infection	2	1			1	1	1				
Incision and curettage	Staphylococcus infection	1	1				1					
Incision and drainage	Contusion of pelvis	2		2			1				1	
Incision, irrigation, and suturing.	Gunshot wound of thigh	1	1				1					
Enlarging of wound, cleansing and packing.	Gunshot wound of hand, perforating.	1	1				1					
Suturing	Wound, incised	12	12								10	2
Do	Wound, lacerated	8	8								8	
Incision and drainage	Wound, punctured	5	2	3					1		4	
Total		3,009	2,915	32	41	21	578	831	37	29	1,299	235

STATISTICAL TABLES.

The following tables show in detail the statistical data upon which the statements in this report are based:

I. Numerical view of the effect of disease and injury on United States troops serving at home and abroad in the year 1907, compared with corresponding data for the year 1906, by races; absolute numbers.

II. Same as Table I; proportionate numbers.

III. Admissions to sick report, discharges, and deaths in the army, with ratios per 1,000 of mean strength, in which all available data for the period 1898–1905 are placed in comparison with the year 1907.

IIIa. Admissions to sick report, discharges, deaths, and noneffectiveness, with ratios per 1,000 of mean strength, year 1907, for officers and total enlisted of the army.

IIIb. Admissions to sick report, discharges, deaths, and noneffectiveness, with ratios per 1,000 of mean strength, for American troops, white, and for American troops, colored, of the army for the year 1907.

IV. Admissions to sick report, discharges, deaths, and noneffectiveness, with ratios per 1,000 of mean strength, for the year 1907, United States continental, excluding Alaska, and separately for white and colored troops serving therein.

V. Admissions to sick report, discharges, deaths, and noneffectiveness, with ratios per 1,000 of mean strength, for the year 1907, Alaska, Cuba, and Hawaii.

VI. Admissions to sick report, discharges, deaths, and noneffectiveness, with ratios per 1,000 of mean strength, for the year 1907,

American troops, white, colored, and total serving in the Philippine Islands.

VII. Admissions to sick report, discharges, deaths, and noneffectiveness, with ratios per 1,000 of mean strength, year 1907, for American troops on transports and for native Porto Rican and Filipino troops.

VIII. Total movement of sick for the United States Army at home compared with that of foreign armies.

IX. A comparison of the admission and death rates of the United States Army at home for certain special diseases with those of foreign armies.

TABLE I.—*Numerical view of the effect of disease and injury on United States troops serving at home and abroad in the year 1907, compared with corresponding data for the year 1906, by races—Absolute numbers.*

		Mean strength.	Admitted.			Discharged on surgeon's certificate of disability.			Died.			Total losses.			Noneffective from sickness.	
			Total.	Disease.	Injury.	Total.	Disease.	Injury.	Total.	Disease.	Injury.	Total.	Disease.	Injury.	Days treated.	Constantly noneffective.
White troops	1907	50,705	60,978	50,357	10,621	1,051	931	120	287	169	118	1,338	1,100	238	840.925	2,303.90
	1906	53,249	68,492	56,611	11,881	1,480	1,334	146	327	171	156	1,807	1,505	302	978,213	2,680.04
Colored troops	1907	3,098	4,568	3,718	850	56	48	8	32	20	12	88	68	20	65,825	180.34
	1906	3,194	3,579	2,828	751	43	40	3	31	21	10	74	61	13	47,602	130.42
Porto Rican troops	1907	564	681	621	60	4	4	.....	8	7	1	12	11	1	8,725	23.90
	1906	544	819	751	68	6	6	.....	9	9	.....	15	15	.....	9,515	26.07
Filipino troops	1907	4,679	5,215	4,592	623	40	39	1	27	24	3	67	63	4	48,792	133.68
	1906	4,759	6,263	5,593	670	51	47	4	58	45	13	109	92	17	60,430	165.56

TABLE II.—*Numerical view of the effect of disease and injury on United States troops serving at home and abroad in the year 1907, compared with corresponding data for the year 1906, by races—Proportionate numbers.*

		Mean strength.	Admitted.			Discharged on surgeon's certificate of disability.			Died.			Total losses.			Constantly noneffective.	Days treated.	
			Total.	Disease.	Injury.	Total.	Disease.	Injury.	Total.	Disease.	Injury.	Total.	Disease.	Injury.		Each soldier.	Each case.
White troops	1907	50,705	1,202.60	993.14	209.47	20.30	17.98	2.32	5.54	3.26	2.28	25.84	21.24	4.60	45.44	16.58	13.79
	1906	53,249	1,286.26	1,063.14	223.12	26.80	24.16	2.64	5.92	3.10	2.82	32.72	27.26	5.46	50.33	18.37	14.28
Colored troops	1907	3,098	1,474.50	1,200.13	274.37	17.70	15.18	2.53	10.12	6.32	3.79	27.82	21.50	6.32	58.21	21.25	14.41
	1906	3,194	1,120.54	885.41	235.13	12.84	11.94	.90	9.26	6.27	2.99	22.10	18.21	3.89	40.83	14.90	13.31
Porto Rican troops	1907	564	1,207.45	1,101.06	106.38	7.09	7.09	.....	14.18	12.41	1.77	21.27	19.50	1.77	42.38	15.47	12.81
	1906	544	1,505.51	1,380.51	125.00	10.99	10.99	.....	16.48	16.48	.....	27.47	27.47	.....	47.92	17.49	11.02
Filipino troops	1907	4,679	1,114.55	981.41	133.15	8.55	8.34	.21	5.77	5.13	.64	14.32	13.47	.85	28.57	10.43	9.36
	1906	4,759	1,316.03	1,175.25	140.79	10.12	9.32	.79	11.51	8.93	2.58	21.62	18.25	3.37	34.79	12.70	9.65

TABLE III.—*Admissions to sick report, discharges, and deaths, with ratios per 1,000 of mean strength, in which all available data for the period 1898–1905 are placed in comparison with the year 1907.*

	U. S. Army, 1898–1905.						American troops—Army, 1907.					
Mean strength	515,790 (Mean annual 64,474).						S. G. O., 53,803—A. G. O., 54,949.					
Causes of admission to sick report.	Admissions.		Discharges.		Deaths.		Admissions.		Discharges.		Deaths.	
	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.
Typhoid fever	8,070	15.65	42	0.08	900	1.74	208	3.87	.....	.....	16	0.29
Malarial fevers, total	178,791	346.64	179	.35	383	.74	3,395	63.19	.....	.....	3	.05
Intermittent	137,069	265.75	4	.01	10	.02	2,562	47.62	.....	.....	.....	.....
Remittent or continued	34,399	66.69	5	.01	103	.20	786	14.60	.....	.....	1	.02
Pernicious	617	1.20	1	.002	225	.44	12	.22	.....	.....	2	.04
Other malarial diseases	6,706	13.00	169	.33	45	.09	35	.65	.....	.....	.....	.....
Smallpox	511	.99	.....	.....	107	.21	5	.09	.....	.....	.....	.....
Measles	6,426	12.46	10	.02	96	.19	549	10.20	.....	.....	.....	.....
Eruptive fevers, others	815	1.56	.....	.....	6	.01	95	1.77	.....	.....	.....	.....
Diphtheria	196	.38	.....	.....	9	.02	14	.26	.....	.....	.....	.....
Influenza	15,297	29.66	.....	.....	5	.01	2,177	40.46	.....	.....	1	.02
Asiatic cholera	520	1.01	.....	.....	308	.60	2	.04	.....	.....	1	.02
Cholera nostras	956	1.85	.....	.....	.....	.....	3	.06	.....	.....	.....	.....
Dysentery	26,453	51.29	462	.90	933	1.81	704	13.09	14	.25	3	.05
Yellow fever	1,026	1.99	.....	.....	156	.30	18	.33	.....	.....	5	.09
Leprosy	1	.002	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Beriberi	56	.11	6	.01	8	.02	1	.02	.....	.....	1	.02
Erysipelas	445	.86	.....	.....	10	.02	44	.82	.....	.....	.....	.....
Dengue	13,824	26.80	.....	.....	1	.002	990	18.40	.....	.....	.....	.....
Mumps	5,724	11.10	.....	.....	.....	.....	354	6.58	.....	.....	.....	.....
Cerebro-spinal fever, including meningitis	206	.40	20	.04	105	.20	41	.76	5	.09	25	.45
Purulent infection and septicemia	106	.20	4	.01	57	.11	10	.19	.....	.....	8	.15
Tuberculosis, pulmonary	2,233	4.33	1,110	2.15	344	.67	247	4.59	166	3.02	24	.44
Total venereal	81,957	158.90	1,623	3.15	23	.04	10,579	196.62	152	2.76	4	.07
Syphilis and its results	11,628	22.55	1,172	2.27	19	.04	1,556	28.92	94	1.71	3	.05
Chancroid and its results	18,018	34.93	26	.05	.....	.....	2,389	44.40	.....	.....	.....	.....
Gonorrhea and its results	52,311	101.42	425	.82	4	.01	6,634	123.30	58	1.05	1	.02
Cancer and other malignant growths	114	.22	24	.05	31	.06	8	.15	3	.05	3	.05
Rheumatism, acute, articular	3,852	7.47	27	.05	7	.01	410	7.62	.....	.....	.....	.....
Rheumatism, subacute and chronic, articular	3,595	6.97	347	.67	1	.002	294	5.46	17	.31	.....	.....
Alcoholism and its results	11,930	23.13	58	.11	133	.26	1,867	34.70	22	.40	8	.15
Insanity	898	1.74	731	1.42	8	.02	101	1.88	79	1.44	.....	.....
Diseases of the brain and spinal cord	1,923	3.73	403	.78	76	.15	36	.67	17	.31	8	.15
Tetanus	14	.03	.....	.....	11	.02	.....	.....	.....	.....	.....	.....
Diseases of the heart	3,106	6.01	818	1.59	190	.37	151	2.81	53	.96	18	.33
Varicocele	2,209	4.28	70	.14	.....	.....	233	4.33	3	.05	.....	.....
Other diseases of the circulatory system	3,458	6.70	159	.31	32	.06	746	13.87	22	.40	6	.11

Adenitis, nonvenereal	3,218	6.24	9	.02			363	6.75				
Lymphangitis	439	.85	10	.02	1	.002	40	.74				
Coryza and other diseases of the nasal fossæ	5,860	11.36	37	.07			1,283	23.85	4	.07		
Bronchitis, acute and chronic	32,302	62.63	42	.08	5	.01	2,552	47.43	5	.09	1	.02
Pneumonia (all)	1,929	3.74	13	.03	278	.54	155	2.88			25	.46
Pleurisy	1,846	3.58	63	.12	17	.03	162	3.01	5	.09	3	.05
Tonsillitis and other diseases of the pharynx	29,793	57.77			2	.004	3,570	66.35				
Gastritis	12,829	24.87	49	.09	21	.04	765	14.22	3	.05		
Diarrhea and enteritis	109,298	211.90	137	.27	206	.40	2,650	49.26	2	.04		
Peritonitis (simple)	106	.21	4	.01	50	.10	2	.04	2	.04		
Inguinal and other herniæ	2,676	5.18	541	1.05	2	.004	211	3.92	30	.54		
Appendicitis	1,624	3.15	51	.10	83	.16	268	4.98	6	.11	4	.07
Diseases of the kidneys	1,505	2.92	144	.28	160	.31	111	2.06	13	.24	3	.05
Periostitis	590	1.14			19	.04	55	1.02	5	.09		
Arthritis and synovitis	3,856	7.48	174	.34			217	4.03	10	.18		

TABLE IIIa.—*Admissions to sick report, discharges, deaths, and noneffectiveness, with ratios per 1,000 of mean strength, for the army—officers and total enlisted—for the year 1907.*

Causes of admission to sick report.	Officers, U. S. Army.						American troops, Army.							
Mean strength	S. G. O., 3,477—A. G. O., 3,710.						S. G. O., 53,803—A. G. O., 54,949.							
	Admissions.		Deaths.		Noneffective.		Admissions.		Discharges.		Deaths.		Noneffective.	
	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.
Typhoid fever	9	2.59			2.72	0.78	208	3.87			16	0.29	42.47	0.79
Fevers, undetermined	9	2.59			.13	.04	447	8.31					7.99	.15
Malarial fevers	116	33.36			2.65	.76	3,395	63.19			3	.05	79.40	1.32
Nonmalignant infection	74	21.28			1.04	.30	2,470	45.91					45.75	.85
Intermittent	68	19.56			.92	.26	2,337	43.44					41.64	.77
Remittent or continued	6	1.73			.12	.03	133	2.47					4.11	.08
Malignant (estivo-autumnal) infection	35	10.07			.99	.28	821	15.25			3	.05	21.64	.40
Intermittent	13	3.74			.22	.06	174	3.23					4.16	.08
Remittent or continued	22	6.33			.77	.22	635	11.80			1	.02	16.62	.31
Pernicious							12	.22			2	.04	.63	.01
Undetermined infection	2	.58			.05	.01	69	1.38					1.48	.02
Intermittent	2	.58			.05	.01	51	.95					.73	.01
Remittent or continued							18	.33					.75	.01
Malarial cachexia	5	1.44			.58	.17	35	.65					2.55	.05
Smallpox							5	.09					.56	.01
Measles	2	.58			.09	.03	549	10.20					25.90	.48
Eruptive fevers, others	2	.58			.06	.02	95	1.77					3.30	.06
Diphtheria							14	.26					1.45	.03
Influenza	225	64.71			4.25	1.22	2,177	40.46			1	.02	35.52	.66
Asiatic cholera							2	.04			1	.02	.05	.001
Cholera nostras							3	.06					.04	.0007
Dysentery	35	10.07			6.43	1.85	704	13.09	14	.25	3	.05	77.13	1.43
Amebic	27	7.77			6.00	1.72	495	9.20	10	.18	2	.04	60.69	1.13
Bacillary							45	.84			1	.02	2.91	.05
Mixed infections and other dysenteries	8	2.30			.43	.12	164	3.05	4	.07			13.53	.25
Yellow fever							18	.33			5	.09	1.25	.02
Leprosy													1.00	.02
Beriberi							1	.02			1	.02	.06	.001
Erysipelas	4	1.15			.09	.03	44	.82					2.09	.04
Dengue	36	10.35			.83	.24	990	18.40					17.33	.32
Mumps	7	2.01			.21	.06	354	6.58					14.06	.26
Cerebro-spinal meningitis, epidemic					.25	.07	34	.63	5	.09	21	.38	2.78	.05
Yaws (frambesia)							2	.04					.31	.01
Vaccinia							1,855	34.48					34.10	.63
Purulent infection and septicemia	2	.58			.07	.02	10	.19			8	.15	.85	.02

Tuberculosis, all	10	2.88	1	.27	6.55	1.88	277	5.15	177	3.22	29	.53	142.71	2.65
Tuberculosis, pulmonary	8	2.30	1	.27	4.40	1.27	247	4.59	166	3.02	24	.44	134.39	2.50
Tuberculosis of other organs	2	.58			2.15	.62	30	.56	11	.20	5	.09	8.32	.15
Venereal diseases	9	2.59			1.94	.56	10,579	196.62	152	2.76	4	.07	668.65	12.43
Syphilis and its results	3	.86			.34	.10	1,556	28.92	94	1.71	3	.05	153.67	2.86
Chancroid and its results	2	.58			.61	.18	2,389	44.40					145.67	2.70
Gonorrhea and its results	4	1.15			.37	.11	6,634	123.30	58	1.05	1	.02	369.30	6.87
Cancer and other malignant growths							8	.15	3	.05	3	.05	2.77	.05
Rheumatism:														
Acute, articular	8	2.30			.92	.26	410	7.62					24.41	.45
Subacute and chronic, articular	11	3.16			.94	.27	294	5.46	17	.31			33.26	.62
Alcoholism and its results	24	6.90			1.19	.34	1,867	34.70	22	.40	8	.15	25.79	.48
Insanity	3	.86			.86	.25	101	1.88	79	1.44			15.36	.29
Epilepsy	3	.86			.74	.21	122	2.27	56	1.02			6.61	.12
Trachoma	1	.29			.04	.01	40	.74	4	.07			2.61	.05
Organic diseases of the heart	6	1.73	1	.27	.87	.25	119	2.21	49	.89	15	.27	18.03	.34
Aneurism							10	.19	2	.04	5	.09	1.45	.03
Functional diseases of the heart	4	1.15			.11	.03	134	2.49	9	.16			7.71	.14
Bronchitis, acute and chronic	111	31.93			2.94	.85	2,552	47.43	5	.09	1	.02	47.33	.88
Broncho-pneumonia					.03	.01	20	.37			1	.02	2.26	.04
Pneumonia (pneumonic fever)	4	1.15	1	.27	.53	.15	135	2.51			24	.44	9.81	.18
Diarrhea and enteritis	138	39.69			3.56	1.03	2,650	49.26	2	.04			41.29	.76
Intestinal parasites	11	3.17			.49	.13	141	2.63					4.92	.10
Teniada	5	1.44			.05	.01	58	1.08					1.24	.02
Tenia saginata	4	1.15			.05	.01	35	.65					.59	.01
Tenia solium	1	.29			.01	.002	15	.28					.23	.004
Hymenolepsis nana							7	.13					.40	.01
Bothriocephalus latus							1	.02					.01	.0003
Ascarida	1	.29			.003	.001	31	.58					.83	.02
Ascaris lumbricoides	1	.29			.003	.001	30	.56					.82	.02
Oxyuris vermicularis							1	.02					.01	.0002
Strongylida	5	1.44			.43	.12	50	.93					2.76	.05
Ankylostomum duodenale	5	1.44			.43	.12	34	.63					1.83	.03
Necator Americanus							16	.30					.93	.02
Trichotrachelida							1	.02					.08	.001
Trichocephalus dispar							1	.02					.08	.001
Other intestinal parasites							1	.02					.01	.0002
Inguinal and other hernia	15	4.31			2.20	.63	211	3.92	30	.54			24.10	.45
Hepatic abscess	2	.58			.02	.005	27	.50	1	.02	6	.11	5.98	.11
Appendicitis	22	6.33			2.83	.81	268	4.98	6	.11	4	.07	24.68	.46
Climatic bubo	1	.29			.01	.003	5	.09					.11	.002
Tropical ulcer	1	.29			.003	.001	44	.82					2.72	.05
Jiggers (pulex penetrans)							8	.15					.12	.002
Pemphigus contagiosus					.003	.001	72	1.34					2.36	.04
Dhobie itch	3	.86			.04	.01	234	4.35					5.88	.11
Prickly heat							34	.63					.66	.01
Acute nephritis							34	.63	4	.07	1	.02	3.90	.07
Chronic nephritis	5	1.44	2	.54	.28	.08	30	.56	7	.13	2	.04	5.54	.10
Malingering					.12	.04	58	1.08					2.44	.05

TABLE IIIa.—*Admissions to sick report, discharges, deaths, and noneffectiveness, with ratios per 1,000 of mean strength for the army—officers and total enlisted—for the year 1907*—Continued.

	Officers, U. S. Army.						American troops, Army.							
Mean strength	S. G. O., 3,477—A. G. O., 3,710.						S. G. O., 53,803—A. G. O., 54,949.							
Causes of admission to sick report.	Admissions.		Deaths.		Noneffective.		Admissions.		Discharges.		Deaths.		Noneffective.	
	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.
External causes, special.														
Fractures, exclusive of gunshot	21	6.04	2	0.54	3.92	1.13	570	10.59	36	0.66	12	0.22	71.38	1.33
Dislocations	6	1.73			.18	.05	193	3.59	12	.22			10.07	.19
Sprains and muscular strains	98	28.18			4.46	1.28	3,015	56.04	4	.07			64.87	1.21
Wounds, gunshot	5	1.44			1.05	.30	154	2.86	27	.62	34	.49	20.41	.38
Wounds other than gunshot	27	7.77			.73	.21	2,832	52.64	17	.31	6	.11	74.07	1.38
Sunstroke							4	.07	2	.04			.04	.0007
Frostbite and general freezing							28	.52	1	.02	1	.02	1.84	.03
Drowning											39	.71		
Poisoning, acute	13	3.74	1	.27	.15	.04	185	3.44			15	.27	2.22	.04
Venomous bites, etc	1	.29			.18	.05	86	1.60					2.17	.04
Snake bite							1	.02					.02	.0004
Other venomous bites, etc	1	.29			.18	.05	85	1.58					2.15	.04
Diseases and injuries grouped.														
General diseases	513	147.54	2	.54	29.18	8.39	24,105	448.03	425	7.74	103	1.88	1,242.24	23.08
Epidemic diseases	437	125.68			17.61	5.06	10,450	194.23	19	.35	51	.93	330.59	6.14
Other general diseases	76	21.86	2	.54	11.58	3.33	13,655	253.80	406	7.39	52	.95	911.65	16.94
Diseases of the nervous system and organs of special sense	214	61.55			18.47	5.31	2,538	46.18	254	4.62	13	.24	131.05	2.44
Of the nervous system	114	32.79			14.45	4.16	1,138	21.15	190	3.46	12	.22	72.08	1.34
Of the eye and its adnexa	80	23.01			3.03	.87	859	15.97	31	.56			34.25	.64
Of the ear and its adnexa	20	5.75			.99	.28	541	10.06	33	.60	1	.02	24.72	.46
Diseases of the—														
Circulatory system	49	14.09	1	.27	3.68	1.06	1,533	28.49	78	1.42	24	.44	93.34	1.73
Respiratory system	234	67.30	1	.27	6.93	1.99	4,596	85.42	28	.51	30	.55	104.41	1.94
Digestive system	568	163.36	2	.54	17.05	4.90	11,852	220.29	52	.95	16	.29	262.05	4.87
Genito-urinary system	38	10.93	2	.54	2.46	.71	926	17.21	36	.66	3	.05	44.22	.82
Skin and cellular tissue	89	25.60			3.76	1.08	5,321	98.90	6	.11			142.02	2.64
Organs of locomotion	76	21.86			4.76	1.37	2,037	37.86	44	.80			74.73	1.39
Malformations, etc							103	1.91	55	1.00			8.33	.15

Diseases, results of old age							4	.07	1	.02			.38	.01
Ill-defined diseases	33	9.49			1.63	.47	1,060	19.70					28.61	.53
Total for disease	1,814	521.71	8	2.16	87.92	25.29	54,075	1,005.06	979	17.82	189	3.44	2,131.36	39.61
External causes	276	79.38	3	.81	14.16	4.07	11,471	213.20	128	2.33	130	2.37	352.88	6.56
Total for disease and external causes	2,090	601.09	11	2.96	102.08	29.36	65,546	1,218.26	1,107	20.15	319	5.81	2,484.25	46.17
Subclassification (repeated above):														
Suicide											26			
Homicide											17			
Accidental deaths			3								86			
Judicial execution											1			

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TABLE IIIb.—*Admissions to sick report, discharges, deaths, and noneffectiveness, with ratios per 1,000 of mean strength, for the army—white enlisted and colored enlisted—for the year 1907.*

	American troops, white.								American troops, colored.							
Mean strength	S. G. O., 50,705—A. G. O., 51,838.								S. G. O., 3,098—A. G. O., 3,111.							
Causes of admission to sick report.	Admissions.		Discharges.		Deaths.		Noneffective.		Admissions.		Discharges.		Deaths.		Noneffective.	
	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.
Typhoid fever	207	4.08			16	0.31	42.34	0.84	1	0.32					0.13	0.04
Fevers, undetermined	407	8.03					7.33	.14	40	12.91					.66	.21
Malarial fevers	3,299	65.06			3	.06	69.51	1.37	96	30.99					1.67	.54
Nonmalignant infection	2,421	47.75					45.03	.89	49	15.82					.72	.23
Intermittent	2,297	45.30					41.11	.82	40	12.91					.53	.17
Remittent or continued	124	2.45					3.92	.08	9	2.91					.19	.06
Malignant (estivo-autumnal) infection	775	15.28			3	.06	20.48	.40	46	14.85					.93	.30
Intermittent	171	3.37					4.12	.08	3	.97					.04	.01
Remittent or continued	592	11.68			1	.02	15.73	.31	43	13.88					.89	.29
Pernicious	12	.24			2	.04	.63	.01								
Undetermined infection	69	1.36					1.48	.03								
Intermittent	51	1.01					.73	.01								
Remittent or continued	18	.35					.75	.01								
Malarial cachexia	34	.67					2.52	.05	1	.32					.02	.01
Smallpox	5	.10					.42	.01							.13	.04
Measles	539	10.63					25.52	.50	10	3.23					.38	.12
Eruptive fevers, others	91	1.80					3.16	.06	4	1.29					.14	.04
Diphtheria	14	.28					1.45	.03								
Influenza	2,153	42.46			1	.02	35.16	.69	24	7.75					.36	.12
Asiatic cholera	2	.04			1	.02	.05	.001								
Cholera nostras	3	.06					.04	.001								
Dysentery	622	12.27	14	.27	2	.04	71.53	1.41	82	26.47			1	0.32	5.60	1.81
Amebic	420	8.28	10	.19	1	.02	55.33	1.09	75	24.21			1	.32	5.36	1.73
Bacillary	44	.87			1	.02	2.89	.06	1	.32					.01	.004
Mixed infections and other dysenteries	158	3.12	4	.08			13.31	.26	6	1.93					.22	.07
Yellow fever	18	.35			5	.10	1.25	.02								
Leprosy							1.00	.02								
Beriberi	1	.02			1	.02	.06	.001								
Erysipelas	43	.85					2.07	.04	1	.32					.03	.01
Dengue	796	15.70					13.67	.26	194	62.62					3.67	1.18
Mumps	315	6.21					12.48	.25	39	12.59					1.58	.51
Cerebro-spinal meningitis, epidemic	34	.67	5	.10	21	.41	2.78	.05								
Yaws (frambesia)	2	.04					.31	.01								

Vaccinia	1,833	36.15					33.62	.66	22	7.10					.48	.16
Purulent infection and septicemia	10	.20			8	.15	.85	.02								
Trichinosis																
Tuberculosis, all	255	5.03	160	3.09	23	.44	130.42	2.57	22	7.10	17	5.37	6	1.90	12.29	3.97
Tuberculosis, pulmonary	231	4.56	149	2.88	19	.37	123.38	2.43	16	5.16	17	5.37	5	1.58	11.01	3.55
Tuberculosis of other organs	24	.47	11	.21	4	.08	7.04	.14	6	1.93			1	.32	1.28	.41
Venereal diseases	9,449	186.35	150	2.90	3	.06	608.78	12.01	1,130	364.75	2	.63	1	.32	59.87	19.32
Syphilis and its results	1,456	28.32	94	1.82	3	.06	142.97	2.82	120	38.73					10.70	3.46
Chancroid and its results	2,002	39.48					124.29	2.45	387	124.92					21.39	6.90
Gonorrhea and its results	6,011	118.55	56	1.08			341.53	6.73	623	201.10	2	.63	1	.32	27.78	8.97
Cancer and other malignant growths	8	.16	3	.06	3	.06	2.77	.05								
Rheumatism:																
Acute, articular	375	7.40					23.16	.46	35	11.30					1.25	.40
Subacute and chronic, articular	252	4.97	17	.33			29.82	.59	42	13.56					3.44	1.11
Alcoholism and its results	1,836	36.21	22	.42	8	.15	25.42	.51	31	10.01					.36	.12
Insanity	96	1.89	75	1.45			14.55	.29	5	1.61	4	1.26			.81	.26
Epilepsy	121	2.39	54	1.04			6.18	.12	1	.32	2	.63			.44	.14
Trachoma	37	.73	4	.08			2.48	.05	3	.97					.13	.04
Organic diseases of the heart	112	2.21	45	.87	13	.25	17.33	.34	7	2.26	4	1.26	2	.63	.70	.22
Aneurism	8	.16	2	.04	4	.08	1.09	.02	2	.65			1	.32	.36	.12
Functional diseases of the heart	126	2.48	8	.15			7.19	.14	8	2.58	1	.32			.52	.17
Bronchitis, acute and chronic	2,395	47.24	5	.10	1	.02	44.29	.87	157	50.68					3.04	.98
Broncho-pneumonia	19	.37			1	.02	2.23	.04	1	.32					.03	.01
Pneumonia (pneumonic fever)	104	2.05			18	.35	8.09	.16	31	10.01			6	1.90	1.72	.56
Diarrhea and enteritis	2,504	49.38	2	.04			38.42	.76	146	47.13					2.87	.93
Intestinal parasites	135	2.66					4.52	.09	6	1.93					.40	.13
Teniada	55	1.09					.91	.02	3	.97					.33	.11
Tenia saginata	34	.67					.43	.01	1	.32					.16	.05
Tenia solium	14	.28					.22	.004	1	.32					.02	.01
Hymenolepsis nana	6	.12					.25	.005	1	.32					.15	.05
Bothriocephalus latus	1	.02					.01	.0003								
Ascarida	30	.59					.81	.02	1	.32					.02	.01
Ascaris lumbricoides	29	.57					.81	.02	1	.32					.02	.01
Oxyuris vermicularis	1	.02					.008	.0002								
Strongylida	48	.95					2.71	.06	2	.65					.05	.02
Ankylostoma duodenale	33	.65					1.80	.04	1	.32					.03	.01
Necator Americanus	15	.30					.91	.02	1	.32					.03	.01
Trichotrachelida							.08	.002								
Trichocephalus dispar	1	.02					.08	.002								
Other intestinal parasites	1	.02					.01	.0002								
Inguinal and other hernia	204	4.03	29	.56			22.96	.45	7	2.26	1	.32			1.14	.37
Hepatic abscess	23	.45	1	.02	6	.12	5.45	.11	4	1.29					.53	.17
Appendicitis	262	5.17	6	.12	4	.08	24.37	.48	6	1.93					.32	.10
Climatic bubo	4	.08					.09	.002	1	.32					.01	.004
Tropical ulcer	39	.77					2.43	.05	5	1.61					.28	.09
Jiggers (pulex penetrans)	8	.16					.12	.002								
Pemphigus contagiosus	66	1.30					2.04	.04	6	1.93					.32	.10
Dhobie itch	185	3.65					4.62	.09	49	15.82					1.26	.41
Prickly heat	28	.55					.62	.01	6	1.93					.04	.01
Acute nephritis	33	.65	4	.08	1	.02	3.87	.07	1	.32					.04	.01
Chronic nephritis	26	.51	7	.14	1	.02	3.99	.08	4	1.29			1	.32	1.55	.50
Malingering	53	1.05					2.63	.05	5	1.61					.08	.03

TABLE III*b*.—*Admissions to sick report, discharges, deaths, and noneffectiveness, with ratios per 1,000 of mean strength, for the army—white enlisted and colored enlisted—for the year 1907*—Continued.

Causes of admission to sick report.	American troops, white. S. G. O., 50,705—A. G. O., 51,838. Mean strength.								American troops, colored. S. G. O., 3,098—A. G. O., 3,111. Mean strength.							
	Admissions.		Discharges.		Deaths.		Noneffective.		Admissions.		Discharges.		Deaths.		Noneffective.	
	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.
External causes, special.																
Fractures, exclusive of gunshot	528	10.42	32	0.62	11	.21	66.70	1.32	42	13.56	4	1.26	1	0.32	4.68	1.51
Dislocations	178	3.51	12	.23			9.75	.19	15	4.84					.31	.10
Sprains and muscular strains	2,783	54.89	4	.08			59.65	1.18	232	74.89					5.21	1.68
Wounds, gunshot	141	2.78	25	.48	32	.62	17.64	.35	13	4.20	2	.63	2	.63	2.77	.89
Wounds other than gunshot	2,589	51.07	16	.31	6	.12	67.72	1.34	243	78.44	1	.32			6.34	2.05
Sunstroke	4	.08	2	.04			.04	.001								
Frostbite and general freezing	26	.51	1	.02	1	.02	1.82	.04	2	.65					.02	.01
Drowning					35	.68							4	1.26		
Poisoning, acute	176	3.47			13	.25	2.06	.04	9	2.90			2	.63	.16	.05
Venomous bites, etc	75	1.48					2.04	.04	11	3.55					.13	.04
Snake bite	1	.02						.0005								
Other venomous bites, etc	74	1.46					2.01	.04	11	3.55					.13	.04
Diseases and injuries, grouped.																
General diseases	22,364	441.06	405	7.82	95	1.83	1,150.41	22.69	1,741	561.98	20	6.32	8	2.53	91.82	29.64
Epidemic diseases	9,977	196.77	19	.37	50	.97	316.42	6.24	473	152.68			1	.32	14.16	4.57
Other general diseases	12,387	244.30	386	7.45	45	.87	833.99	16.45	1,268	409.30	20	6.32	7	2.21	77.66	25.07
Diseases of the nervous system and organs of special sense	2,338	46.11	246	4.75	12	.23	122.69	2.42	200	64.56	8	2.53	1	.32	8.37	2.70
Of the nervous system	1,055	20.81	183	3.53	11	.21	69.19	1.36	83	26.79	7	2.21	1	.32	2.89	.93
Of the eye and its adnexa	778	15.34	31	.60			29.89	.59	81	26.15					4.36	1.41
Of the ear and its adnexa	505	9.96	32	.62	1	.02	23.60	.47	36	11.62	1	.32			1.12	.36
Diseases of the—																
Circulatory system	1,436	28.32	71	1.37	20	.39	87.94	1.73	97	31.31	7	2.21	4	1.26	5.40	1.74
Respiratory system	4,332	85.44	28	.54	24	.46	97.10	1.91	264	85.22			6	1.90	7.31	2.36
Digestive system	11,166	220.21	49	.95	16	.31	246.24	4.86	686	221.43	3	.95			15.18	5.11
Genito-urinary system	848	16.72	34	.66	2	.04	39.86	.79	78	25.18	2	.63	1	.32	4.35	1.41
Skin and cellular tissue	4,929	97.21	6	.12			131.21	2.59	392	126.53					10.79	3.48
Organs of locomotion	1,847	36.43	41	.79			68.54	1.35	190	61.33	3	.95			6.19	2.00
Malformations, etc	99	1.95	50	.97			8.12	.16	4	1.29	5	1.58			.21	.07

Diseases, results of old age	4	.08	1	.02			.38	.01								
Ill-defined diseases	994	19.60					27.06	.53	66	21.30					1.55	.50
Total for disease	50,357	993.14	931	17.98	169	3.26	1,979.55	39.04	3,718	1,200.13	48	15.18	20	6.32	51.81	49.00
External causes	10,621	209.47	120	2.32	118	2.28	324.35	6.40	850	274.37	8	2.53	12	3.79	28.54	9.21
Total for disease and external causes	60,978	1,202.60	1,051	20.30	287	5.54	2,303.90	45.44	4,568	1,474.50	56	17.70	32	10.12	180.34	58.21
Subclassification (repeated above):																
Suicide					26											
Homicide					15								2			
Accidental deaths					77								9			
Judicial execution													1			

TABLE IV.—*Admissions to sick report, discharges, deaths, and noneffectiveness, with ratios per 1,000 of mean strength, for the year 1907, United States, continental (excluding Alaska).*

Causes of admission to sick report.	United States, continental (excluding Alaska), total.								United States, continental (excluding Alaska), white.								United States, continental (excluding Alaska) colored.							
Mean strength	S. G. O., 35,132—A. G. O., 36,087.								S. G. O., 34,091—A. G. O., 35,046.								S. G. O., 1,041—A. G. O., 1,041.							
	Admissions.		Discharges.		Deaths.		Noneffective.		Admissions.		Discharges.		Deaths.		Noneffective.		Admissions.		Discharges.		Deaths.		Noneffective.	
	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.
Typhoid fever	124	3.53			7	0.19	22.48	0.64	123	3.61			7	0.20	22.35	0.66	1	0.96					0.13	0.12
Fevers, undetermined	164	4.67					3.62	.10	161	4.72					3.59	.11	3	2.88					.03	.03
Malarial fevers, total	1,061	30.20					22.09	.63	1,060	31.09					22.07	.65	1	.96					.02	.02
Nonmalignant infection	986	28.07					18.24	.52	985	28.89					18.23	.53	1	.96					.02	.02
Intermittent	960	27.33					17.17	.49	959	28.13					17.16	.50	1	.96					.02	.02
Remittent or continued	26	.74					1.07	.03	26	.76					1.07	.03								
Malignant (estivo-autumnal) infection	61	1.74					3.02	.09	61	1.79					3.05	.09								
Intermittent	34	.97					1.34	.04	34	1.00					1.34	.04								
Remittent or continued	26	.74					1.63	.05	26	.76					1.63	.05								
Pernicious	1	.03					.05	.002	1	.03					.05	.002								
Undetermined infection	5	.14					.18	.005	5	.15					.18	.005								
Intermittent	5	.14					.18	.005	5	.15					.18	.005								
Malarial cachexia	9	.26					.65	.02	9	.26					.65	.02								
Smallpox	4	.11					.50	.01	4	.12					.37	.01							.13	.13
Measles	487	13.86					23.02	.68	485	14.23					22.89	.67	2	1.92					.13	.13
Eruptive fevers, others	91	2.59					3.14	.09	88	2.58					3.05	.09	3	2.88					.09	.09
Diphtheria	11	.31					.75	.02	11	.32					.75	.02								
Influenza	2,037	57.98			1	.03	33.83	.99	2,014	59.08			1	.03	33.48	.98	23	22.09					.35	.33
Cholera nostras	2	.06					.01	.0002	2	.06					.01	.0002								
Dysentery	147	4.18	13	.36			23.82	.68	146	4.28	13	.37			23.33	.68	1	.96					.48	.47
Amebic	99	2.82	10	.28			17.75	.52	98	2.87	10	.28			17.26	.51	1	.96					.48	.47
Bacillary	12	.34					1.07	.03	12	.35					1.07	.03								
Mixed infections and other dysenteries	36	1.02	3	.08			5.00	.14	36	1.06	3	.09			5.00	.15								
Leprosy							1.00	.03							1.00	.03								
Erysipelas	38	1.08					1.93	.05	37	1.09					1.90	.06	1	.96					.03	.03
Dengue	119	3.39					2.10	.06	118	3.46					2.05	.06	1	.96					.05	.04
Mumps	303	8.62					12.07	.34	295	8.65					11.69	.34	8	7.68					.38	.36

Cerebro-spinal meningitis, epidemic	33	.94	5	.14	20	.55	2.77	.08	33	.97	5	.14	20	.57	2.77	.08						
Vaccinia	1,832	52.15					33.83	.96	1,810	53.09					33.35	.98	22	21.13			.48	.47
Purulent infection and septicæmia	7	.20			5	.14	.71	.02	7	.21			5	.14	.71	.02						
Tuberculosis, all	172	4.90	142	3.93	19	.53	125.28	3.57	162	4.75	128	3.65	15	.43	115.51	3.39	10	9.61	14	13.45	4	3.84	9.77	9.38
Tuberculosis, pulmonary	156	4.44	134	3.71	15	.42	119.51	3.40	147	4.31	120	3.42	11	.31	110.08	3.23	9	8.65	14	13.45	4	3.84	9.44	9.06
Tuberculosis of other organs	16	.46	8	.22	4	.11	5.77	.17	15	.44	8	.23	4	.11	5.44	.16	1	.96					.33	.32
Venereal diseases, all	5,896	167.82	135	3.74	1	.03	394.04	11.22	5,710	167.49	133	3.80			383.82	11.26	186	178.67	2	1.92	1	.96	10.22	9.81
Syphilis and its results	891	25.36	85	2.36			96.66	2.75	867	25.43	85	2.43			94.11	2.76	24	23.05					2.55	2.45
Chancroid and its results	1,222	34.78					78.20	2.23	1,172	34.38					75.36	2.21	50	48.03					2.84	2.73
Gonorrhœa and its results	3,783	107.68	50	1.39	1	.03	219.18	6.24	3,671	107.68	48	1.37			214.36	6.29	112	107.59	2	1.92	1	.96	4.82	4.63
Cancer and other malignant growths	4	.11	3	.08	2	.06	2.29	.07	4	.12	3	.09	2	.06	2.29	.07								
Rheumatism:																								
Acute, articular	329	9.36					20.57	.59	311	9.12					19.81	.58	18	17.29					.76	.73
Subacute and chronic, articular	219	6.23	13	.36			25.43	.72	210	6.16	13	.37			24.91	.73	9	8.65					.52	.50
Alcoholism and its results	1,268	36.09	19	.53	5	.14	17.56	.50	1,259	36.93	19	.54	5	.14	17.44	.51	9	8.65					.12	.12
Insanity	63	1.79	56	1.55			9.73	.28	59	1.73	52	1.48			9.37	.27	4	3.84	4	3.84			.36	.35
Epilepsy	100	2.85	51	1.41			5.03	.14	99	2.90	49	1.40			4.59	.13	1	.96	2	1.92			.44	.42
Trachoma	26	.74	3	.08			1.64	.05	26	.76	3	.09			1.64	.05								
Organic diseases of the heart	86	2.45	40	1.11	11	.30	12.48	.36	83	2.43	37	1.06	11	.31	12.13	.36	3	2.88	3	2.88			.35	.34
Aneurism	7	.20	2	.06	3	.08	1.21	.03	7	.21	2	.06	3	.09	1.08	.03							.12	.12
Functional diseases of the heart	89	2.53	8	.22			4.53	.13	86	2.52	7	.20			4.11	.12	3	2.88	1	.96			.42	.40
Bronchitis, acute and chronic	1,904	54.19	4	.11	1	.03	34.18	.97	1,867	54.77	4	.11	1	.03	33.54	.99	37	35.54					.64	.61
Broncho-pneumonia	14	.40			1	.03	1.76	.05	14	.41			1	.03	1.76	.05								
Pneumonia (pneumonic fever)	89	2.53			17	.47	6.99	.20	82	2.41			15	.43	6.57	.19	7	6.72			2	1.92	.42	.40
Diarrhœa and enteritis	1,384	39.39	2	.06			17.88	.51	1,370	40.19	2	.06			17.57	.52	14	13.45					.31	.30
Intestinal parasites	61	1.74					1.27	.04	59	1.73					1.09	.03	2	1.92					.18	.18
Teniada	38	1.08					.71	.02	36	1.06					.53	.02	2	1.92					.18	.18
Tenia saginata	25	.71					.47	.01	24	.70					.31	.01	1	.96					.16	.16
Tenia solium	11	.31					.19	.005	10	.29					.17	.005	1	.96					.02	.02
Hymenolepsis nana	1	.03					.03	.001	1	.03					.03	.001								
Bothriocephalus latus	1	.03					.01	.0004	1	.03					.01	.0004								
Ascarida	4	.11					.11	.003	4	.12					.11	.003								
Ascaris lumbricoides	3	.09					.10	.003	3	.09					.10	.003								
Oxyuris vermicularis	1	.03					.01	.0002	1	.03					.01	.0002								
Strongylida	17	.48					.37	.01	17	.50					.37	.01								
Ankylostomum duodenale	14	.40					.33	.01	14	.41					.33	.01								
Necator Americanus	3	.09					.04	.001	3	.09					.04	.001								
Trichotrachelida	1	.03					.08	.002	1	.03					.08	.002								
Trichocephalus dispar	1	.03					.08	.002	1	.03					.08	.002								
Other intestinal parasites	1	.03					.01	.0003	1	.03					.01	.0003								
Inguinal and other herniæ	157	4.47	29	.81			16.98	.48	155	4.55	28	.80			16.60	.49	2	1.92	1	.96			.38	.36
Hepatic abscess	11	.31	1	.03	3	.08	3.79	.11	11	.32	1	.03	3	.09	3.79	.11								
Appendicitis and abscesses of iliac fossæ	183	5.21	6	.17	4	.11	18.32	.52	180	5.28	6	.17	4	.11	18.13	.53	3	2.88					.19	.18

TABLE IV.—*Admissions to sick report, discharges, deaths, and noneffectiveness, with ratios per 1,000 of mean strength, for the year 1907, United States, continental (excluding Alaska)*—Continued.

	United States, continental (excluding Alaska), total.								United States, continental (excluding Alaska), white.								United States, continental (excluding Alaska) colored.							
Mean strength	S. G. O., 35,132—A. G. O., 36,087.								S. G. O., 34,091—A. G. O., 35,046.								S. G. O., 1,041—A. G. O., 1,041.							
	Admissions.		Discharges.		Deaths.		Noneffective.		Admissions.		Discharges.		Deaths.		Noneffective.		Admissions.		Discharges.		Deaths.		Noneffective.	
Causes of admission to sick report.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.
Tropical ulcer	9	0.26					1.28	0.04	9	0.26					1.28	0.04								
Jiggers (pulex penetrans)	5	.14					.05	.001	5	.15					.05	.002								
Pemphigus contagiosus	1	.03					.01	.0004	1	.03					.01	.0004								
Dhobie itch	19	.54					.50	.01	19	.56					.50	.01								
Prickly heat	12	.34					.20	.01	12	.35					.20	.01								
Acute nephritis	30	.85	4	0.11	1	0.03	3.72	.11	30	.88	4	0.11	1	0.03	3.72	.11								
Chronic nephritis	26	.74	6	.17	2	.06	4.75	.14	24	.70	6	.17	1	.03	3.54	.10	2	1.92			1	0.96	1.21	1.16
Malingering	37	1.05					1.41	.04	34	1.00					1.38	04	3	2.88					03	.03
External causes, special.																								
Fractures, exclusive of gunshot	385	10.96	31	.86	9	.25	53.28	1.52	377	11.06	28	.80	9	.26	51.03	1.50	8	7.68	3	2.88			2.25	2.17
Dislocations	129	3.67	10	.28			7.23	.21	129	3.78	10	.28			7.22	.21							.01	.01
Sprains and muscular strains	2,086	59.38	3	.08			44.07	1.25	2,034	59.66	3	.09			43.05	1.27	52	49.95					1.01	.97
Wounds, gunshot	100	2.85	22	.61	23	.64	13.72	.39	92	2.70	20	.57	22	.63	11.69	.34	8	7.68	2	1.92	1	.96	2.04	1.96
Wounds other than gunshot	1,873	53.31	15	.41	5	.14	50.30	1.43	1,827	53.59	14	.40	5	.14	48.92	1.44	46	44.19	1	.96			1.39	1.34
Sunstroke	2	.06	1	.03			.02	.001	2	.06	1	.03			.02	.001								
Frostbite and general freezing	22	.63			1	.03	.95	.03	20	.59			1	.03	.93	.03	2	1.92					.02	.02
Drowning					19	.53							19	.54										
Poisoning, acute	60	1.71			12	.33	.68	.02	58	1.71			10	.28	.68	.02	2	1.92			2	1.92	.01	.01
Venomous bites, etc	34	.97					1.00	.03	33	.97					.99	.03	1	.96					.01	.01
Other venomous bites, etc	34	.97					1.00	.03	33	.97					.99	.03	1	.96					.01	.01
Diseases and injuries grouped.																								
General diseases	14,318	407.55	351	9.73	60	1.66	777.59	22.13	14,021	411.28	335	9.56	55	1.57	753.70	22.11	297	285.30	16	15.37	5	4.80	23.89	22.95
Epidemic diseases	6,289	179.01	18	.50	28	.78	183.34	5.22	6,226	182.63	18	.51	28	.80	181.08	5.31	63	60.52					2.27	2.18
Other general diseases	8,029	228.54	333	9.23	32	.89	594.25	16.91	7,795	228.65	317	9.05	27	.77	572.62	16.80	234	224.78	16	15.37	5	4.80	21.62	20.77

Diseases of the nervous system and organs of special sense.	1,593	45.34	201	5.57	7	.19	88.80	2.53	1,557	45.67	194	5.53	7	.20	85.46	2.51	36	34.58	7	6.72	.....	.....	3.34	3.20
Of the nervous system	708	20.15	154	4.27	6	.17	49.12	1.40	690	20.24	147	4.19	6	.17	47.60	1.40	18	17.29	7	6.72	.....	.....	1.52	1.46
Of the eye and its adnexa	574	16.34	20	.55	.....	.....	23.40	.67	558	16.37	20	.57	.....	.....	21.84	.64	16	15.37	.....	.....	.....	.....	1.56	1.50
Of the ear and its adnexa	311	8.85	27	.75	1	.03	16.27	.46	309	9.06	27	.77	1	.03	16.02	.47	2	1.92	.....	.....	.....	.....	.25	.24
Diseases of the—																								
Circulatory system	965	27.47	64	1.77	17	.47	58.43	1.66	944	27.69	59	1.68	17	.48	56.62	1.66	21	20.17	5	4.80	.....	.....	1.81	1.74
Respiratory system	3,499	99.60	22	.61	21	.58	76.32	2.17	3,427	100.53	22	.63	19	.54	74.42	2.18	72	69.16	.....	.....	2	1.92	1.90	1.82
Digestive system	7,770	221.17	47	1.30	9	.25	162.67	4.63	7,620	223.52	45	1.28	9	.26	158.40	4.65	150	144.09	2	1.92	.....	.....	4.27	4.11
Genito-urinary system	595	16.94	33	.92	3	.08	31.66	.90	577	16.93	31	.88	2	.06	29.76	.87	18	17.29	2	1.92	1	.96	1.90	1.83
Skin and cellular tissue	2,881	82.00	5	.14	.....	.....	77.83	2.22	2,844	83.42	5	.14	.....	.....	76.63	2.25	37	35.54	.....	.....	.....	.....	1.20	1.15
Organs of locomotion	1,357	38.63	38	1.05	.....	.....	48.41	1.38	1,309	38.40	36	1.03	.....	.....	46.95	1.38	48	46.11	2	1.92	.....	.....	1.47	1.41
Malformations, etc	80	2.28	47	1.30	.....	.....	6.05	.17	77	2.26	42	1.20	.....	.....	5.90	.17	3	2.88	5	4.80	.....	.....	.15	.14
Diseases, results of old age	3	.09	1	.03	.....	.....	.37	.01	3	.09	1	.03	.....	.....	.37	.01	.....	.....	.....	.....	.....	.....	.....	.....
Ill-defined diseases	521	14.83	.....	.....	.....	.....	16.51	.47	508	14.90	.....	.....	.....	.....	16.25	.48	13	12.49	.....	.....	.....	.....	.26	.25
Total for disease	33,582	955.88	809	22.42	117	3.24	1,344.65	38.27	32,887	964.68	770	21.97	109	3.11	1,304.46	38.26	695	667.63	39	37.47	8	7.69	40.19	38.61
External causes	7,594	216.16	106	2.94	86	2.38	243.94	6.94	7,424	217.77	100	2.85	82	2.34	234.41	6.88	170	163.30	6	5.76	4	3.84	9.53	9.16
Total for disease and external causes	41,176	1,172.04	915	25.36	203	5.63	1,588.59	45.22	40,311	1,182.45	870	24.82	191	5.45	1,538.87	45.14	865	830.93	45	43.23	12	11.53	49.72	47.76
Subclassification (repeated above):																								
Suicide	.....	.....	.....	.....	18	.....	.....	.....	.....	.....	.....	.....	18	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Homicide	.....	.....	.....	.....	14	.....	.....	.....	.....	.....	.....	.....	13	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....
Accidental violence	.....	.....	.....	.....	54	.....	.....	.....	.....	.....	.....	.....	51	.....	.....	.....	.....	.....	.....	.....	3	.....	.....	.....

TABLE V.—*Admissions to sick report, discharges, deaths, and noneffectiveness, with ratios per 1,000 of mean strength, for the year 1907—Alaska, Cuba, and Hawaii.*

	Alaska.								Cuba.								Hawaii.							
Mean strength	S. G. O., 847—A. G. O., 882.								S. G. O., 4,436—A. G. O., 4,579.								S. G. O., 192—A. G. O., 192.							
	Admissions.		Discharges.		Deaths.		Noneffective.		Admissions.		Discharges.		Deaths.		Noneffective.		Admissions.		Discharges.		Deaths.		Noneffective.	
Causes of admission to sick report.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio
Typhoid fever									41	9.24			6	1.31	12.87	2.90								
Fevers, undetermined									93	20.96					1.48	.33								
Malarial fevers	1	1.18					0.04	0.05	228	51.40			1	.22	7.86	1.77								
Nonmalignant infection	1	1.18					.04	.05	154	34.72					4.25	.96								
Intermittent	1	1.18					.04	.05	138	31.11					3.65	.71								
Remittent or continued									16	3.61					.61	.14								
Malignant (estivo-autumnal) infection									63	14.20			1	.22	3.04	.68								
Intermittent									10	2.25					.23	.05								
Remittent or continued									49	11.05			11		2.54	.57								
Pernicious									4	.90				.22	.27	.06								
Undetermined infection									10	2.25					.56	.13								
Intermittent									6	1.35					.13	.03								
Remittent or continued									4	.90					.43	.10								
Malarial cachexia									1	.23					.01	.003								
Measles									16	3.61					.66	.15								
Eruptive fevers, others									1	.23					.04	.01								
Influenza	74	87.37					.82	.97	23	5.18					.42	.09								
Cholera nostras																	1	5.21					0.03	0.14
Dysentery									41	9.24					2.97	.67								
Amebic									12	2.71					.84	.19								
Bacillary									11	2.48					.82	.19								
Mixed infections and other dysenteries									18	4.06					1.32	.30								
Yellow fever									18	4.06			5	1.09	1.25	.28								
Erysipelas									1	.23					.01	.003								
Dengue									130	29.31					2.63	.59	3	15.62					.06	.31

Mumps									6	1.35					.25	.06								
Vaccinia									12	2.71					.18	.04	1	5.21					.02	.10
Purulent infection and septicemia									1	.23			1	.22	.02	.004								
Tuberculosis, all	3	3.54	2	2.27			.29	.34	16	3.61	7	1.53			1.19	.27								
Tuberculosis, pulmonary	3	3.54	2	2.27			.29	.34	15	3.38	7	1.53			1.01	.23								
Tuberculosis of other organs									1	.23					.18	.04								
Venereal diseases, total	47	55.49	1	1.13			3.50	4.14	676	152.39	11	2.40			38.44	8.66	43	223.96	1	5.21			2.47	12.84
Syphilis and its results	2	2.36					.22	.26	118	26.60	7	1.53			8.81	1.99	3	15.62	1	5.21			.34	1.77
Chancroid and its results	13	15.35					.58	.69	143	32.24					8.75	1.97	3	15.62					.20	1.04
Gonorrhea and its results	32	37.78	1	1.13			2.70	3.19	415	93.55	4	.87			20.88	4.71	37	192.71					1.93	10.03
Rheumatism:																								
Acute, articular	8	9.45					.33	.39	12	2.71					.67	.15	3	15.62					.12	.63
Subacute and chronic, articular	2	2.36					.09	.11	8	1.80					.68	.15	1	5.21					.04	.19
Alcoholism and its results	18	21.25			1	1.13	.15	.18	217	48.92	1	.22			3.01	.68	13	67.71					.14	.74
Insanity									14	3.16	12	2.62			1.12	.25								
Epilepsy	1	1.18	1	1.13			.19	.23	5	1.13	3	.65			.47	.11	1	5.21					.21	1.11
Trachoma									5	1.13					.53	.12								
Organic diseases of the heart	1	1.18					.28	.33	9	2.03	4	.87			.66	.15			1	5.21			.02	.10
Aneurism									1	.23					.003	.001								
Functional diseases of the heart	8	9.45					.44	.51	6	1.35					.42	.10								
Other diseases of the circulatory system	10	11.80					.47	.56	84	18.94					3.81	.85	2	10.42					.15	.78
Bronchitis, acute and chronic	48	56.67					.97	1.14	129	29.08	1	.22			2.96	.66	5	26.04					.19	1.01
Broncho-pneumonia									2	.45					.35	.08								
Pneumonia (pneumonic fever)	3	3.54			1	1.13	.22	.26	3	.68			1	.22	.28	.06							.26	1.34
Diarrhea and enteritis	1	1.18					.003	.003	344	77.55					4.08	.92	8	41.67					.11	.57
Intestinal parasites	1	1.18					.01	.01																
Teniada															.05	.01								
Tenia saginata	1	1.18					.01	.01	6	1.35														
Tenia solium									2	.45					.02	.004								
Inguinal and other hernia	1	1.18					.003	.003	15	3.38					2.06	.46	1	5.21					.08	.41
Hepatic abscess															.12	.03								
Appendicitis	5	5.90					.09	.11	41	9.24					3.78	.85	1	5.21					.01	.06
Tropical ulcer									10	2.25					.19	.04								
Jiggers (pulex penetrans)									3	.68					.06	.01								
Dhobie itch									5	1.13					.10	.02								
Prickly heat									6	1.35					.18	.04								
Malingering	1	1.18					.005	.01	10	2.25					.73	.16								
External causes, special.																								
Fractures, exclusive of gunshot	4	4.72					.56	.66	64	14.43	1	.22	1	.22	5.35	1.21							.06	.30
Dislocations	6	7.08					.14	.16	14	3.16					.50	.11	2	10.42					.11	.59

TABLE V.—*Admissions to sick report, discharges, deaths, and noneffectiveness, with ratios per 1,000 of mean strength, for the year 1907—Alaska, Cuba, and Hawaii*—Continued.

Causes of admission to sick report.	Alaska.								Cuba.								Hawaii.							
Mean strength	S. G. O., 847—A. G. O., 882.								S. G. O., 4,436—A. G. O., 4,579.								S. G. O., 192—A. G. O., 192.							
	Admissions.		Discharges.		Deaths.		Noneffective.		Admissions.		Discharges.		Deaths.		Noneffective.		Admissions.		Discharges.		Deaths.		Noneffective.	
	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.
External causes, special—Continued.																								
Sprains and muscular strains	42	49.59					0.60	0.71	245	55.23	1	0.22			5.75	1.30	6	31.25					0.09	0.48
Wounds, gunshot	3	3.54					.14	.16	10	2.25			3	0.65	.92	.21								
Wounds other than gunshot	42	49.59	1	1.13			1.77	2.09	228	51.40	1	.22			5.43	1.22	5	26.04					.25	1.28
Sunstroke											1	.22												
Frostbite and general freezing	6	7.08	1	1.13			.89	1.05																
Drowning													4	.87										
Poisoning, acute	1	1.18					.01	.01	6	1.35			1	.22	.04	.01								
Venomous bites, etc									9	2.03					.09	.02								
Diseases and injuries grouped.																								
General diseases	156	184.18	3	3.40	1	1.13	5.38	6.35	1,481	333.86	32	6.99	13	2.84	74.69	16.84	65	338.54	1	5.21			2.87	14.96
Epidemic diseases	75	88.55					.86	1.02	517	116.55			12	2.62	29.14	6.57	5	26.04					.11	.56
Other general diseases	81	95.63	3	3.40	1	1.13	4.52	5.33	964	217.31	32	6.99	1	.22	45.55	10.27	60	312.50	1	5.21			2.76	14.40
Diseases of the nervous system and organs of special sense	25	29.52	3	3.40			1.59	1.88	218	49.15	23	5.02	1	.22	10.87	2.45	6	31.25					.35	1.81
Of the nervous system	15	17.71	2	2.27			1.31	1.55	123	27.73	18	3.93	1	.22	6.15	1.39	2	10.42					.23	1.18
Of the eye and its adnexa	8	9.45	1	1.13			.26	.30	53	11.95	2	.44			2.46	.55	4	20.83					.12	.63
Of the ear and its adnexa	2	2.36					.02	.03	42	9.47	3	.65			2.26	.51								
Diseases of the—																								
Circulatory system	19	22.43	1	1.13			1.26	1.49	100	22.54	5	1.09			4.90	1.10	2	10.42	1	5.21			.17	.88
Respiratory system	61	72.02			1	1.13	1.28	1.51	246	55.46	2	.44	1	.22	6.07	1.37	19	98.96					.77	4.00

Digestive system	70	82.64					.99	1.17	1,041	234.67					21.23	4.79	32	166.67					.59	3.08
Genito-urinary system	9	10.63					.15	.17	84	18.94	2	.44			3.56	.80	8	41.67					.17	.90
Skin and cellular tissue	24	28.34					.88	1.05	606	136.61					14.01	3.16	20	104.17					.53	2.77
Organs of locomotion	38	44.86					1.26	1.49	159	35.84	4	.87			5.37	1.21	12	62.50					.72	3.75
Malformations, etc	3	3.54	2	2.27			.15	.18	5	1.13	4	.87			.32	.07								
Diseases, results of old age	1	1.18					.01	.01																
Ill-defined diseases	2	2.36					.02	.02	179	40.35					4.74	1.07	1	5.21					.005	.03
Total for disease	408	481.70	9	10.20	2	2.27	12.98	15.33	4,119	928.54	72	15.72	15	3.28	145.74	32.85	165	859.37	2	10.42			6.18	32.18
External causes	149	175.91	2	2.27	1	1.13	4.99	5.90	1,046	235.80	7	1.53	10	2.18	27.67	6.24	20	104.17					.62	3.24
Total for disease and external causes	557	657.62	11	12.47	3	3.40	17.98	21.22	5,165	1,164.34	79	17.25	25	5.46	173.41	39.09	185	963.54	2	10.42			6.80	35.42
Subclassification (repeated above):																								
Suicide													1											
Homicide													1											
Accidental deaths					1								8											

TABLE VI.—*Admissions to sick report, discharges, deaths, and noneffectiveness, with ratios per 1,000 of mean strength, for the year 1907, Philippine Islands.*

	Philippine Islands, total.								Philippine Islands, white.								Philippine Islands, colored.							
Mean strength	S. G. O., 11,699—A. G. O., 11,712.								S. G. O., 9,854—A. G. O., 9,854.								S. G. O., 1,845—A. G. O., 1,858.							
	Admissions.		Discharges.		Deaths.		Noneffective.		Admissions.		Discharges.		Deaths.		Noneffective.		Admissions.		Discharges.		Deaths.		Noneffective.	
Causes of admissions to sick report.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.
Typhoid fever	41	3.50			3	0.26	6.93	0.59	41	4.16			3	0.30	6.93	0.70								
Fevers, undetermined	184	15.73					2.72	.23	151	15.32					2.24	.23	33	17.87					0.48	0.26
Malarial fevers	1,963	167.79			2	.17	38.69	3.31	1,872	189.97			2	.20	37.10	3.76	91	49.32					1.59	.86
Nonmalignant infection	1,195	102.14					21.12	1.81	1,151	116.80					20.48	2.09	44	23.85					.64	.35
Intermittent	1,105	94.45					18.70	1.60	1,070	108.58					18.25	1.85	35	18.97					.45	.25
Remittent or continued	90	7.69					2.42	.21	81	8.22					2.23	.23	9	4.88					.19	.10
Malignant (estivo-autumnal) infection	693	59.24			2	.17	15.05	1.29	647	65.65			2	.20	14.11	1.43	46	24.93					.93	.50
Intermittent	127	10.86					2.57	.22	124	12.58					2.53	.26	3	1.63					.04	.02
Remittent or continued	559	47.78			1	.09	12.18	1.04	516	52.36			1	.10	11.29	1.15	43	23.31					.89	.48
Pernicious	7	.60			1	.09	.30	.03	7	.71			1	.10	.30	.03								
Undetermined infection	50	4.28					.66	.06	50	5.07					.66	.07								
Intermittent	36	3.08					.34	.03	36	3.65					.34	.03								
Remittent or continued	14	1.20					.32	.03	14	1.42					.32	.03								
Malarial cachexia	25	2.14					1.85	.16	24	2.44					1.83	.19	1	.54					.02	.01
Smallpox	1	.09					.05	.005	1	.10					.05	.01								
Measles	34	2.91					1.96	.17	30	3.04					1.84	.19	4	2.17					.12	.07
Eruptive fevers, others	3	.26					.12	.01	2	.20					.08	.01	1	.54					.04	.02
Diphtheria	3	.26					.61	.05	3	.30					.61	.06								
Influenza	19	1.62					.25	.02	18	1.83					.24	.02	1	.54					.01	.006
Asiatic cholera	2	.17			1	.09	.05	.005	2	.20			1	.10	.05	.01								
Dysentery	494	42.23	1	0.09	3	.26	46.45	3.97	413	41.91	1	0.10	2	.20	41.42	4.20	81	43.90			1	0.54	5.02	2.72
Amebic	369	31.54			2	.17	38.78	3.32	295	29.94			1	.10	34.00	3.45	74	40.11			1	.54	4.79	2.59
Bacillary	21	1.80			1	.09	1.01	.09	20	2.03			1	.10	1.00	.10	1	.54					.01	.007
Mixed infections and other dysenteries	104	8.89	1	.09			6.65	.57	98	9.95	1	.10			6.43	.65	6	3.25					.22	.12
Beriberi	1	.09			1	.09	.06	.01	1	.10			1	.10	.06	.01								
Erysipelas	4	.34					.14	.01	4	.41					.14	.01								

Dengue	738	63.08					12.55	1.07	545	55.31					8.93	.91	193	104.61					3.62	1.96
Mumps	22	1.88					1.33	.11	7	.71					.42	.04	15	8.13					.91	.49
Yaws (frambesia)	2	.17					.31	.03	2	.20					.31	.03								
Vaccinia	6	.51					.05	.004	6	.61					.05	.005								
Purulent infection and septicemia	2	.17			2	.17	.12	.01	2	.20			2	.20	.12	.01								
Tuberculosis, all	80	6.84	26	2.22	10	.85	9.76	.83	69	7.00	23	2.33	8	.81	7.68	.78	11	5.96	3	1.61	2	1.08	2.08	1.13
Tuberculosis, pulmonary	68	5.81	23	1.96	9	.77	7.66	.66	62	6.29	20	2.03	8	.81	6.54	.66	6	3.25	3	1.61	1	.54	1.13	.61
Tuberculosis of other organs	12	1.03	3	.26	1	.09	2.09	.18	7	.71	3	.30			1.14	.12	5	2.71			1	.54	.95	.52
Venereal diseases	3,641	311.22	4	.34	3	.26	219.61	18.77	2,729	276.94	4	.41	3	.30	171.02	17.36	912	494.31					48.38	26.34
Syphilis and its results	514	43.93	1	.09	3	.26	45.25	3.87	421	42.72	1	.10	3	.30	37.18	3.77	93	50.41					8.07	4.37
Chancroid and its results	937	80.10					55.38	4.73	613	62.21					37.17	3.77	324	175.61					18.21	9.87
Gonorrhea and its results	2,190	187.19	3	.26			118.98	10.17	1,695	172.01	3	.30			96.67	9.81	495	268.29					22.32	12.09
Cancer and other malignant growths	3	.26			1	.09	.35	.03	3	.30			1	.10	.35	.04								
Rheumatism:																								
Acute, articular	50	4.27					2.53	.22	34	3.45					2.09	.21	16	8.67					.44	.24
Subacute and chronic, articular	61	5.21	4	.34			6.75	.58	29	2.94	4	.41			3.84	.39	32	17.34					2.92	1.58
Alcoholism and its results	342	29.23	2	.17	1	.09	4.77	.41	320	32.47	2	.20	1	.10	4.53	.46	22	11.92					.24	.13
Insanity	22	1.88	11	.94			3.18	.27	22	2.23	11	1.12			2.79	.28							.39	.21
Epilepsy	13	1.11	1	.09			.52	.04	13	1.32	1	.10			.52	.05								
Trachoma	9	.77	1	.09			.44	.04	6	.61	1	.10			.31	.03	3	1.63					.13	.07
Organic diseases of the heart	23	1.97	4	.34	4	.34	3.51	.30	19	1.93	3	.30	2	.20	3.26	.33	4	2.17	1	.54	2	1.08	.25	.14
Aneurism	2	.17			2	.17	.16	.01					1	.10			2	1.08			1	.54	.16	.09
Functional diseases of the heart	30	2.56					1.88	.16	25	2.54					1.78	.18	5	2.17					.10	.05
Bronchitis, acute and chronic	430	36.76					8.38	.72	313	31.76					6.04	.61	117	63.41					2.33	1.27
Broncho-pneumonia	4	.34					.14	.01	3	.30					.12	.01	1	.54					.03	.02
Pneumonia (pneumonic fever)	23	1.97			3	.26	1.70	.15	9	.91			1	.10	.65	.07	14	7.59			2	1.08	1.05	.57
Diarrhea and enteritis	848	72.48					18.27	1.56	725	73.57					15.79	1.60	123	66.67					2.48	1.34
Intestinal parasites	69	5.89					3.44	.30	65	6.60					3.22	.33	4	2.17					.22	.13
Teniada	10	.85					.45	.04	9	.91					.30	.03	1	.54					.15	.08
Tenia saginata	3	.26					.06	.01	3	.30					.06	.01								
Tenia solium	1	.09					.02	.001	1	.10					.02	.002								
Hymenolepsis nana	6	.51					.37	.03	5	.51					.22	.02	1	.54					.15	.08
Ascarida	26	2.22					.70	.06	25	2.54					.68	.07	1	.54					.02	.009
Ascaris lumbricoides	26	2.22					.70	.06	25	2.54					.68	.07	1	.54					.02	.009
Strongylida	33	2.82					2.29	.20	31	3.15					2.24	.23	2	1.08					.05	.04
Ankylostomum duodenale	20	1.71					1.39	.12	19	1.93					1.37	.14	1	.54					.03	.02
Necator Americanus	13	1.11					.90	.08	12	1.22					.87	.09	1	.54					.03	.02
Inguinal and other hernia	31	2.65	1	.09			4.75	.40	27	2.74	1	.10			4.03	.41	4	2.17					.72	.39
Hepatic abscess	15	1.28			3	.26	1.84	.16	11	1.12			3	.30	1.31	.13	4	2.17					.53	.29
Appendicitis	38	3.25					2.46	.21	35	3.55					2.33	.24	3	1.63					.13	.07
Climatic bubo	5	.43					.11	.01	4	.41					.09	.01	1	.54					.01	.007
Tropical ulcer	23	1.97					1.17	.10	18	1.83					.88	.09	5	2.71					.28	.15
Pemphigus contagiosus	71	6.07					2.35	.20	65	6.60					2.02	.21	6	3.25					.32	.18

TABLE VI.—*Admissions to sick report, discharges, deaths, and noneffectiveness, with ratios per 1,000 of mean strength, for the year 1907, Philippine Islands*—Continued.

Causes of admissions to sick report.	Philippine Islands, total. Mean strength: S. G. O., 11,699—A. G. O., 11,712.								Philippine Islands, white. S. G. O., 9,854—A. G. O., 9,854.								Philippine Islands, colored. S. G. O., 1,845—A. G. O., 1,858.							
	Admissions.		Discharges.		Deaths.		Non-effective.		Admissions.		Discharges.		Deaths.		Non-effective.		Admissions.		Discharges.		Deaths.		Non-effective.	
	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.
Dhobie itch	206	17.61					5.13	0.44	158	16.03					3.90	0.40	48	26.02					1.23	0.67
Prickly heat	16	1.37					.28	.02	10	1.01					.24	.02	6	3.25					.04	.02
Acute nephritis	4	.34					.18	.01	3	.30					.15	.01	1	.54					.04	.02
Chronic nephritis	4	.34	1	0.09			.70	.06	2	.20	1	0.10			.36	.04	2	1.08					.34	.19
Malingering	9	.77					.26	.02	7	.71					.21	.02	2	1.63					.05	.03
External causes, special.																								
Fractures, exclusive of gunshot	114	9.75	4	.34	2	.17	11.75	1.00	81	8.22	3	.30	1	0.10	9.39	.96	33	17.88	1	0.54	1	0.54	2.36	1.28
Dislocations	41	3.50	2	.17			1.96	.17	26	2.64	2	.20			1.65	.17	15	8.13					.31	.17
Sprains and muscular strains	628	53.68					13.79	1.17	450	45.67					9.78	.99	178	96.47					4.00	2.17
Wounds, gunshot	40	3.42	5	.43	8	.68	5.02	.43	35	3.55	5	.51	7	.71	4.38	.44	5	2.71			1	.54	.65	.35
Wounds other than gunshot	673	57.52			1	.09	16.03	1.36	478	48.51			1	.10	11.10	1.13	195	105.70					4.93	2.67
Sunstroke	2	.17					.01	.001	2	.20					.01	.001								
Drowning					15	1.28							12	1.22							3	1.61		
Poisoning, acute	117	10.00			1	.09	1.41	.12	110	11.16			1	.10	1.26	.12	7	3.79					.15	.08
Venomous bites, etc	42	3.59					1.07	.09	32	3.25					.95	.09	10	5.42					.12	.07
Snake bite	1	.09					.02	.002	1	.10					.02	.002								
Other venomous bites, etc	41	3.50					1.05	.09	31	3.15					.93	.09	10	5.42					.12	.07
Diseases and injuries grouped.																								
General diseases	7,548	645.19	38	3.25	27	2.30	356.34	30.46	6,163	625.42	34	3.45	24	2.44	290.54	29.48	1,385	750.67	4	2.15	3	1.61	65.80	35.67
Epidemic diseases	3,333	284.90	1	.09	10	.85	109.56	9.37	2,947	299.06	1	.10	9	.91	98.24	9.97	386	209.21			1	.54	11.32	6.14
Other general diseases	4,215	360.29	37	3.16	17	1.45	246.78	21.09	3,216	326.36	33	3.34	15	1.52	192.29	19.51	999	541.46	4	2.15	2	1.08	54.48	29.53
Diseases of the nervous system and organs of special sense	617	52.75	27	2.31	4	.34	24.61	2.10	466	47.30	26	2.64	4	.41	20.10	2.04	151	81.84	1	.54			4.52	2.45
Of the nervous system	226	19.32	16	1.37	4	.34	11.83	1.01	174	17.66	16	1.62	4	.41	10.64	1.08	52	28.18					1.20	.65
Of the eye and its adnexa	211	18.04	8	.68			7.19	.61	146	14.82	8	.81			4.65	.47	65	35.23					2.55	1.38
Of the ear and its adnexa	180	15.39	3	.26			5.59	.48	146	14.82	2	.20			4.82	.49	34	18.43	1	.54			.77	.42

Diseases of the—																							
Circulatory system	434	37.10	7	.60	7	.60	26.18	2.24	359	36.43	5	.51	3	.30	22.78	2.31	75	40.65	2	1.08	4	2.15	3.41	1.85
Respiratory system	688	58.81	4	.34	5	.43	17.86	1.53	511	51.86	4	.41	3	.30	12.87	1.30	177	95.93			2	1.08	4.99	2.70
Digestive system	2,696	230.45	5	.43	7	.60	70.71	6.04	2,204	223.66	4	.41	7	.71	59.83	6.07	492	266.66	1	.54			10.88	5.90
Genito-urinary system	222	18.98	1	.09			8.36	.71	163	16.54	1	.10			5.93	.60	59	31.98					2.44	1.32
Skin and cellular tissue	1,729	147.79	1	.09			47.23	4.04	1,381	140.14	1	.10			37.74	3.83	348	188.62					9.49	5.14
Organs of locomotion	452	38.64	2	.17			17.67	1.51	315	31.97	1	.10			13.22	1.34	137	74.25	1	.54			4.45	2.41
Malformations, etc	15	1.28	2	.17			1.40	.12	14	1.42	2	.20			1.34	.14	1	.54					.06	.03
Ill-defined diseases	341	29.15					6.47	.55	292	29.63					5.33	.54	49	26.56					1.14	.62
Total for disease	14,742	1,260.11	87	7.43	50	4.27	576.84	49.31	11,868	1,204.38	78	7.92	41	4.16	469.68	47.66	2,874	1,557.71	9	4.84	9	4.84	107.17	58.08
External causes	2,609	223.01	13	1.11	31	2.65	72.30	6.18	1,938	196.67	11	1.12	24	2.44	54.04	5.48	671	363.68	2	1.08	7	3.77	18.26	9.90
Total for disease and external causes	17,351	1,483.12	100	8.54	81	6.92	649.14	55.49	13,806	1,401.06	89	9.03	65	6.60	523.71	53.14	3,545	1,921.40	11	5.92	16	8.61	125.43	67.98
Subclassification (repeated above):																								
Suicide					7								7								1			
Homicide					2								1								5			
Accidental deaths					21								16								1			
Judicial execution					1																			

TABLE VII.—*Admissions to sick report, discharges, deaths, and noneffectiveness, with ratios per 1,000 of mean strength, for the year 1907—Transports, Porto Rican troops, and Filipino troops.*

	Transports.								Porto Rican troops.								Philippine scouts.							
Mean strength	1,497 (1,285 white; 212 colored).								564.								4,679.							
	Admissions.		Discharges.		Deaths.		Noneffective.		Admissions.		Discharges.		Deaths.		Noneffective		Admissions.		Discharges.		Deaths.		Noneffective.	
Causes of admission to sick report.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.
Typhoid fever	2	1.34					0.19	0.13	14	24.82			3	5.32	2.57	4.56	6	1.28					1.07	0.23
Fevers, undetermined	6	4.01					.16	.10	14	24.82					.14	.25	91	19.45					1.41	.30
Malarial fevers	142	94.86					2.50	1.67	134	237.59			1	1.77	2.99	5.30	1,463	312.67			2	0.43	24.30	5.19
Nonmalignant infection	134	89.51					2.08	1.40	130	230.50					2.70	4.78	1,323	282.75					19.41	4.15
Intermittent	133	88.84					2.07	1.39	120	212.77					2.42	4.30	1,263	269.93					18.51	3.96
Remittent or continued	1	.67					.01	.005	10	17.73					.27	.48	60	12.82					.90	.19
Malignant (estivo-autumnal) infection	4	2.67					.29	.20	2	3.55			1	1.77	.13	.24	137	29.28					4.22	.90
Intermittent	3	2.00					.02	.01									52	11.11					1.11	.24
Remittent or continued	1	.67					.27	.18									83	17.74			1	.21	2.90	.62
Pernicious							.01	.005	2	3.55			1	1.77	.13	.24	2	.43			1	.21	.21	.04
Undetermined infection	4	2.67					.08	.05																
Intermittent	4	2.67					.08	.05																
Malarial cachexia							.04	.03	2	3.55					.16	.28	3	.64					.68	.14
Smallpox									10	17.73					.68	1.20								
Measles	12	8.02					.25	.17	26	46.10					1.16	2.05	2	.43					.07	.01
Eruptive fevers, others																	16	3.42					.80	.17
Diphtheria							.09	.06																
Influenza	24	16.03					.20	.13	35	62.06					.64	1.14	70	14.96					1.05	.22
Asiatic cholera																	1	.21			2	.43	.003	.0005
Dysentery	22	14.70					3.89	2.60	3	5.32					.04	.07	112	23.94	1	0.21	3	.64	6.13	1.31
Amebic	15	10.02					3.32	2.22									53	11.33	1	.21	1	.21	3.97	.85
Bacillary	1	.67					.01	.005									7	1.50			1	.21	.30	.06
Mixed infections and other dysenteries	6	4.01					.56	.37	3	5.32					.04	.07	52	11.11			1	.21	1.86	.40
Leprosy																	1	.21	1	.21			.66	.14
Beriberi																	115	24.58	3	.64	6	1.28	7.35	1.57
Erysipelas	1	.67					.01	.01									1	.21					.04	.008
Dengue																	62	13.25					.71	.15
Mumps	23	15.36					.41	.27									2	.43					.04	.009

Cerebro-spinal meningitis, epidemic	1	.67			1	0.67	.01	.005																						
Yaws (frambesia)																					3	.64							.13	.03
Vaccinia	4	2.67					.02	.01	5	8.87							.18	.32	3	.64									.04	.008
Purulent infection and septicemia																			1	.21			1	.21					.15	.03
Tuberculosis, all	6	4.01					6.20	4.14	4	7.09	1	1.77	2	3.55	.32	.57	23	4.92	21	4.49	6	1.28	3.87	.83						
Tuberculosis, pulmonary	5	3.34					5.92	3.95	2	3.55	1	1.77	1	1.77	.12	.20	20	4.27	21	4.49	4	.85	3.51	.75						
Tuberculosis of other organs	1	.67					.28	.19	2	3.55			1	1.77	.21	.37	3	.64			2	.43	.36	.08						
Venereal diseases	276	184.37					10.60	7.08	116	205.67	1	1.77			7.46	13.22	297	63.48					16.82	3.59						
Syphilis and its results	28	18.70					2.40	1.61	3	5.32					.30	.52	20	4.27					1.44	.31						
Chancroid and its results	71	47.43					2.56	1.71	53	93.97					3.75	6.66	35	7.48					2.02	.48						
Gonorrhea and its results	177	118.24					5.63	3.76	60	106.38	1	1.77			3.41	6.04	242	51.72					13.12	2.81						
Cancer and other malignant growths	1	.67					.12	.08																						
Rheumatism, acute, articular	8	5.34					.19	.13	10	17.73					.37	.66	16	3.42					.45	.10						
Rheumatism, subacute and chronic, articular	3	2.00					.26	.18	2	3.55					.01	.02	3	.64					.04	.009						
Alcoholism and its results	9	6.01			1	.67	.16	.10									6	1.28					.04	.009						
Insanity	2	1.34					1.32	.88									4	.85	2	.43			1.18	.25						
Epilepsy	2	1.34					.18	.12	3	5.32	1	1.77			.04	.07	4	.85	1	.21			.49	.10						
Trachoma																	3	.64					.34	.07						
Organic diseases of the heart							1.08	.72									5	1.07	1	.21	1	.21	.10	.02						
Aneurism							.08	.05																						
Filariasis									5	8.87					.34	.61														
Functional diseases of the heart	1	.67					.44	.29	1	1.77					.01	.01														
Bronchitis, acute and chronic	36	24.05					.65	.43	11	19.50					.29	.51	212	45.31	1	.21			4.24	.90						
Broncho-pneumonia																	3	.64					.28	.06						
Pneumonia (pneumonic fever)	17	11.36			2	1.34	.37	.25	1	1.77			1	1.77	.02	.03	3	.64					.32	.07						
Diarrhea and enteritis	65	43.42					.95	.63	25	44.33					.37	.65	253	54.07					2.63	.56						
Intestinal parasites	2	1.34					.13	.09	7	12.41					.23	.40	40	8.55					1.72	.36						
Teniada									1	1.77					.07	.13	2	.43					.05	.01						
Tenia saginata									1	1.77					.07	.13	1	.21					.02	.005						
Tenia solium	1	.67					.01	.007									1	.21					.03	.006						
Ascarida																	5	1.07					.28	.06						
Ascaris lumbricoides	1	.67					.02	.01									4	.85					.19	.04						
Oxyuris vermicularis																	1	.21					.09	.02						
Strongylida									6	10.64					.15	.27	27	5.77					1.21	.26						
Ankylostomum duodenale							.10	.07									21	4.49					.93	.20						
Necator Americanus									6	10.64					.15	.27	6	1.28					.28	.06						
Trichotrachelida																	5	1.07					.15	.03						
Trichocephalus dispar																	5	1.07					.15	.03						
Other intestinal parasites																	1	.21					.02	.005						

TABLE VII.—*Admissions to sick report, discharges, deaths, and noneffectiveness, with ratios per 1,000 of mean strength, for the year 1907—Transports, Porto Rican troops, and Filipino troops*—Continued.

Causes of admission to sick report.	Transports.								Porto Rican troops.								Philippine Scouts.							
Mean strength	1,497 (1,285 white; 212 colored).								564.								4,679.							
	Admissions.		Discharges.		Deaths.		Noneffective.		Admissions.		Discharges.		Deaths.		Noneffective.		Admissions.		Discharges.		Deaths.		Noneffective.	
	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.
Inguinal and other herniæ	6	4.01					0.23	0.15	2	3.55					0.07	0.12	14	2.99					1.32	.28
Hepatic abscess	1	.67					.23	.15									2	.43					.38	.08
Appendicitis									3	5.32					.29	.51	5	1.07					.37	.08
Tropical ulcer	2	1.34					.07	.05									51	10.90					1.85	.40
Jiggers (pulex penetrans)									1	1.77					.005	.01								
Pemphigus contagiosus							.003	.002									8	1.71					.34	.07
Dhobie itch	4	2.67					.15	.10	3	5.32					.05	.09	156	33.34					3.28	.70
Tenia imbricata									1	1.77					.04	.07								
Prickly heat									1	1.77					.01	.02	1	.21					.005	.002
Acute nephritis																	1	.21					.14	.03
Chronic nephritis							.08	.06	1	1.77					.02	.04	1	.21	1	.21			.23	.05
Malingering	1	.67					.05	.03									1	.21					.003	.006
External causes, special.																								
Fractures, exclusive of gunshot	3	2.00					.38	.25	1	1.77					.02	.03	7	1.49					.76	.22
Dislocations	1	.67					.12	.08									4	.85					.11	.02
Sprains and muscular strains	8	5.34					.57	.38	6	10.64					.12	.21	106	22.64					1.58	.34
Wounds, gunshot	1	.67					.61	.40	1	1.77			1	1.77	.003	.005	6	1.28	1	.21	1	.21	.77	.16
Wounds other than gunshot	11	7.35					.28	.18	26	46.10					.50	.89	198	42.35					4.78	1.02
Drowning					1	.67															2	.43		
Poisoning, acute					1	.67	.07	.05									15	3.21					.19	.04
Venomous bites, etc	1	.67					.005	.004									21	4.49					.33	.07
Diseases and injuries grouped.																								
General diseases	537	358.72			2	1.34	25.36	16.94	359	636.52	2	3.55	6	10.64	16.42	29.12	2,220	474.66	26	5.56	20	4.27	64.67	13.82
Epidemic diseases	231	154.31			1	.67	7.57	5.05	227	402.48			4	7.09	8.26	14.65	1,857	396.88	5	1.07	13	2.78	42.38	9.06
Other general diseases	306	204.41			1	.67	17.80	11.89	132	234.04	2	3.55	2	3.55	8.16	14.47	363	77.58	21	4.49	7	1.50	22.28	4.76

Diseases of the nervous system and organs of special sense	79	52.77			1	.67	4.84	3.23	14	24.82	2	3.55			.26	.46	189	40.40	9	1.92	1	.21	7.69	1.65
Of the nervous system	64	42.75			1	.67	3.44	2.30	7	12.41	2	3.55			.12	.20	58	12.40	6	1.28	1	.21	4.07	.87
Of the eye and its adnexa	9	6.01					.82	.55	4	7.09					.04	.07	107	22.87	1	.21			2.88	.62
Of the ear and its adnexa	6	4.01					.58	.38	3	5.32					.11	.19	24	5.13	2	.43			.74	.16
Diseases of the—																						
Circulatory system	13	8.68					2.40	1.60	17	30.14					.61	1.08	62	13.25	1	.21	1	.21	2.54	.54
Respiratory system	83	55.44			2	1.34	2.11	1.41	17	30.14			1	1.77	.44	.79	321	68.60	2	.43	1	.21	8.00	1.71
Digestive system	243	162.32					5.85	3.91	76	134.75					1.38	2.45	785	167.77			1	.21	11.71	2.50
Genito-urinary system	8	5.34					.31	.21	17	30.14					.90	1.60	35	7.48	1	.21			1.96	.42
Skin and cellular tissue	61	40.75					1.54	1.03	92	163.12					2.34	4.15	722	154.31					19.10	4.08
Organs of locomotion	19	12.69					1.28	.86	14	24.82					.26	.47	141	30.13					2.63	.56
Malformations, etc							.41	.27									1	.21					.03	.006
Ill-defined diseases	16	10.69					.86	.58	15	26.60					.15	.27	116	24.79					2.57	.55
Total for disease	1,059	707.41			5	3.34	44.97	30.04	621	1,101.06	4	7.09	7	12.41	22.78	40.39	4,592	981.41	39	8.34	24	5.13	120.90	25.84
External causes	53	35.40			2	1.34	3.36	2.25	60	106.38			1	1.77	1.12	1.99	623	133.15	1	.21	3	.64	12.77	2.73
Total for disease and external causes	1,112	742.82			7	4.68	48.33	32.29	681	1,207.45	4	7.09	8	14.18	23.90	42.38	5,215	1,114.55	40	8.55	27	5.77	133.68	28.57
Subclassification (repeated above):																						
Suicide													1											
Accidental deaths					2																3			

TABLE VIII.—*Total movement of sick for the United States Army at home compared with that of foreign armies.*

	United States (continental) year 1907 (American troops enlisted men).						British, year 1906.[a]		French, year 1904.	
	White and colored.		White.		Colored.					
	Total.	Hospital.	Total.	Hospital.	Total.	Hospital.	Total.	Hospital.	Total.	Hospital.
Mean strength	35,132		34,091		1,041		230,128		[b] 474,345	
Admitted to sick report	41,176	30,199	40,311	29,507	865	692		136,353	275,348	101,851
Ratio per 1,000 of mean strength	1,172.04	859.59	1,182.45	865.54	830.93	664.75		[a] 592.50	649.00	215.0
Disposed of, all causes	[c] 41,609		[c] 40,653		[c] 956					
Ratio per 1,000 of mean strength	1,184.36		1,192.48		918.35					
Died, all causes	[d] 203		[d] 191		[d] 12		1,331		[e] 1,525	
Ratio per 1,000 of mean strength	5.63		5.45		11.53		[a] 5.52		3.21	
Ratio per 1,000 of all disposed of	4.88		4.70		12.55					
Died of disease	117		109		8		1,111		1,266	
Ratio per 1,000 of mean strength	3.24		3.11		7.68		4.61		2.67	
Died of injury	86		82		4		220		259	
Ratio per 1,000 of mean strength	2.38		2.34		3.84		.91		.54	
Died on sick report or present with command	[f] 140		[f] 129		[f] 11				1,274	
Ratio per 1,000 of mean strength	3.88		3.68		10.57				2.7	
Ratio per 1,000 of all disposed of	3.36		3.17		11.51					
Died not on sick report or absent from command	63		62		1				251	
Accidental deaths	54		51		3				174	
Suicides	18		18				49		85	
Returned to duty	39,395		38,518		877					
Ratio per 1,000 of all disposed of	946.79		947.48		917.36					
Otherwise disposed of	1,096		1,074		22					
Ratio per 1,000 of all disposed of	26.34		26.42		23.01					
Total days lost on account of sickness	579,836	496,831	561,688	480,054	18,148	16,777		2,860,275	4,292,761	
Constantly noneffective on account of sickness	1,588.59	1,361.18	1,538.87	1,315.22	49.72	45.96		7,836.37	11,728.9	
Ratio per 1,000 of mean strength	45.22	38.74	45.14	38.58	47.76	44.15		[a] 34.63	24.73	
Average days of treatment:										
For each soldier of mean strength	16.50	14.14	16.48	14.08	17.43	16.12		[a] 12.64	9.7	
For each case of sickness	14.08	16.45	13.93	16.27	20.98	24.24		[a] 21.44	15.5	
Discharges for disability, all causes	915		870		45		2,830		22,985	
Ratio per 1,000 of mean strength	25.36		24.82		43.23		[a] 11.93		48.4	
Total losses per 1,000 of mean strength	30.98		30.27		54.76		17.45		51.61	

	Prussian, year 1904.		Bavarian, year 1905.		Austro-Hungarian, year 1905.		Dutch, year 1903.		Spanish, year 1905.		Belgian, year 1904.	
	Total.	Hospital.	Total.	Hospital.	Total.	Hospital.	Total.	Hospital.	Total.	Hospital.	Total.	Hospital.
Mean strength	529,427	.....	64,707	.....	283,558	.....	28,357	.....	79,768	.....	40,382	.....
Admitted to sick report	331,925	137,708	42,685	15,578	210,529	96,132	37,497	20,013	71,561	28,019	.....	18,432
Ratio per 1,000 of mean strength	627.0	260.1	659.7	240.7	742.4	339.0	1,321.0	676.0	897.1	351.2	.....	457.68
Disposed of, all causes	330,784	.....	42,919	.....	211,497	.....	38,003	.....	71,737	.....	.....	18,165
Ratio per 1,000 of mean strength	624.79	.....	663.3	.....	745.87	.....	1,340.0	.....	899.3	.....	.....	449.83
Died, all causes	c 984	.....	c 136	.....	c 1,050	.....	c 75	.....	c 414	.....	c 131	88
Ratio per 1,000 of mean strength	1.86	.....	2.1	.....	3.70	.....	2.6	.....	5.19	.....	3.24	2.18
Ratio per 1,000 of all disposed of	2.97	.....	3.2	.....	4.97	.....	2.0	.....	5.77	.....	.....	4.84
Died of disease	648	.....	105	.....	721	.....	66	.....	387	.....	102	83
Ratio per 1,000 of mean strength	1.22	.....	1.6	.....	2.54	.....	2.2	.....	4.85	.....	2.53	2.06
Died of injury	336	.....	31	.....	329	.....	9	.....	27	.....	29	5
Ratio per 1,000 of mean strength	.63	.....	.5	.....	1.16	.....	.3	.....	.34	.....	.71	.12
Died on sick report or present with command	714	.....	106	.....	.....	.....	.....	.....	.....	.....	.....	.....
Ratio per 1,000 of mean strength	1.35	.....	1.6	.....	.....	.....	.....	.....	.....	.....	.....	.....
Ratio per 1,000 of all disposed of	2.16	.....	2.5	.....	.....	.....	.....	.....	.....	.....	.....	.....
Died not on sick report or absent from command	270	.....	30	.....	.....	.....	.....	.....	.....	.....	.....	.....
Accidental deaths	133	.....	8	.....	82	.....	5	.....	16	.....	24	.....
Suicides	203	.....	23	.....	247	.....	4	.....	11	.....	5	.....
Returned to duty	313,127	.....	40,496	.....	182,878	.....	35,476	.....	65,808	.....	.....	15,645
Ratio per 1,000 of all disposed of	946.6	.....	943.5	.....	864.7	.....	932.0	.....	917.3	.....	.....	861.27
Otherwise disposed of	17,019	.....	2,321	.....	27,898	.....	2,461	.....	5,542	.....	.....	2,452
Ratio per 1,000 of all disposed of	51.4	.....	54.1	.....	131.9	.....	65.3	.....	77.2	.....	.....	133.88
Total days lost on account of sickness	4,925,149	.....	625,611	.....	3,696,265	.....	.....	.....	276,826	.....	850,194	344,517
Constantly noneffective on account of sickness	13,456.7	.....	1,714.0	.....	10,126.75	.....	.....	.....	758.43	.....	2,329.3	941.30
Ratio per 1,000 of mean strength	25.42	.....	26.5	.....	35.71	.....	.....	.....	26.75	.....	29.2	23.31
Average days of treatment:												
For each soldier of mean strength	9.3	.....	9.7	.....	13.0	.....	.....	.....	9.7	.....	10.6	8.53
For each case of sickness	14.4	.....	14.2	.....	16.9	.....	.....	.....	13.7	.....	28.5	18.64
Discharges for disability, all causes	24,357	.....	3,229	.....	(g)	.....	.....	.....	(g)	2,833	645	.....
Ratio per 1,000 of mean strength	46.0	.....	49.9	.....	.....	.....	.....	.....	.....	36.2	15.97	.....
Total losses per 1,000 of mean strength	47.86	.....	52.0	.....	.....	.....	.....	.....	.....	41.39	19.21	.....

a British ratios for the United Kingdom are: Admitted, 446.7; died, 2.92; discharged as invalids, 14.40; noneffective, 24.86; average days for each soldier, 9.07; for each case, 20.31.

b Total effective, including officers.

c Includes dispositions of cases remaining from previous year.

d Death ratios are calculated on the average strength present and absent, total 36,087; white, 35,046; colored, 1,041.

e The number of deaths is given as reported on Int. table No. IX and ratios made therefrom, thereby affording better comparison with the same figures for American troops.

f Including deaths in general hospitals.

g Table X not furnished on international tables of Austro-Hungarian and Dutch armies.

TABLE IX.—*A comparison of the admission and death rates of the United States Army at home for certain special diseases with those of foreign armies.*

	Admission rates per 1,000 of mean strength.												Death rates per 1,000 of mean strength.											
	United States, continental (enlisted men), year 1907.			British, year 1906, home and abroad.	French, year 1904.	Prussian, year 1904.	Bavarian, year 1905.	Austro-Hungarian, year 1905.	Dutch, year 1903.	Russian, year 1905.	Spanish, year 1905.	Belgian, year 1904.	United States, continental (enlisted men), year 1907.			British, year 1906, home and abroad.	French, year 1904.	Prussian, year 1904.	Bavarian, year 1905.	Austro-Hungarian, year 1905.	Dutch, year 1903.	Russian, year 1905.	Spanish, year 1905.	Belgian, year 1904.
	White.	Colored.	Total.										White.	Colored.	Total.									
1. Alkoholismus acutus, including delirium tremens	34.73	8.65	33.96	1.7	0.29	0.08	0.17	.....	0.24	0.2	0.08	0.15	0.14	.....	0.14	0.05	.....	.....	.....	.....	.....	0.001	.....	.....
2. Bronchitis acuta	51.19	35.54	50.72	a18.5	76.2	48.9	66.0	89.7	80.4	18.2	29.00	34.97	.....	.....	.....	a.01	.....	.....	.....	0.05	.....	.....	0.03	.....
3. Cholera Asiatica	.....	.....	.....	.3	.....	.....	.....	.....	.....	.01	.....	.....	.....	.....	.....	.19	.....	.....	.....	.....	.....	.002	.....	.....
4. Cholera nostras	.06	.....	.06	.....	.....	.....	.02	.....	.....	.01	.....	.02	.....	.....	.....	.....	.....	.....	.....	.....	.....	.001	.....	.....
5. Diphtheria et croup	.32	.....	.31	.3	1.2	.54	.08	.0	.03	.1	.02	.05	.....	.....	.....	.....	0.03	0.02	0.02	.00	.....	.01	.01	.....
6. Dysenteria	4.28	.96	4.18	5.9	2.3	.03	.....	.6	.105	.7	.07	.....	.....	.....	.....	.21	.04	.....	.....	.01	.....	.03	.....	.....
7. Erysipelas	1.09	.96	1.08	.3	1.6	1.4	1.7	1.5	1.7	2.7	4.41	.84	.....	.....	.....	.01	.01	.01	.....	.01	.....	.06	.06	.....
8. Febris intermittens (malaria)	29.28	.96	28.44	61.1	1.1	.14	.05	1.5	7.4	28.8	21.34	.22	.....	.....	.....	.09	.....	.....	.....	.00	0.03	.06	.10	0.02
9. Febris recurrens	.....	.....	.....	2.5	.....	.....	.....	.....	.....	.05	.12	.....	.....	.....	.....	.04	.....	.....	.....	.....	.....	.001	.....	.....
10. Gonorrhea	107.68	107.59	107.68	50.1	21.1	12.9	10.4	29.0	20.1	31.8	20.42	22.14	.....	0.96	.03	.....	.....	.....	.....	.....	.....	.....	.....	.....
11. Hernia	4.55	1.92	4.47	3.0	6.3	2.0	1.1	5.1	5.6	3.2	3.51	5.25	.....	.....	.....	.....	.....	.....	.....	.00	.....	.002	.....	.....
12. Influenza	59.08	22.09	57.98	13.9	21.7	8.8	21.6	5.8	19.7	19.0	27.01	14.04	.03	.....	.03	.....	.21	.01	.02	.02	.03	.06	.12	.....
13. Insolatio (Hitzschlag, coup de chaleur)	.06	.....	.06	2.1	.53	.12	.53	.4	.07	.03	.01	.42	.....	.....	.....	.19	.01	.01	.....	.01	.....	.....	.....	.....
14. Meningitis cerebro-spinalis epidemica	.97	.....	.94	.1	.07	.07	.31	.....	.03	.02	.03	.07	.57	.....	.55	.06	.04	.01	.20	.....	.03	.01	.02	.05
15. Morbilli	14.23	1.92	13.86	.7	6.5	.65	.68	.7	.81	.3	8.17	.42	.....	.....	.....	.....	.05	.....	.....	.01	.....	.01	.10	.....
16. Parotitis epidemica	8.65	7.68	8.62	.5	11.8	.71	1.8	2.5	.71	3.3	5.03	.42	.....	.....	.....	.....	.....	.....	.....	.00	.....	.002	.....	.....
17. Pleuritis	3.29	8.65	3.44	(b)	7.8	3.5	3.2	6.6	(b)	8.9	2.00	3.59	.03	.....	.03	(b)	.04	.03	.05	.16	(b)	.2	.06	.10
18. Pneumonia crouposa sive lobaris	2.41	6.72	2.53	a3.6	2.4	5.9	7.9	4.6	4.9	4.4	2.28	2.53	.43	1.92	.47	a.38	.15	.25	.25	.26	.31	.35	.20	.22
19. Rheumatismus articulorum	15.28	25.94	15.60	12.0	14.2	8.3	11.2	12.1	11.5	5.0	15.90	14.29	.....	.....	.....	.03	.02	.02	.02	.02	.....	.01	.02	.02
20. Scarlatina	.47	.....	.46	.6	1.9	.6	.79	.2	1.3	.1	.26	.32	.....	.....	.....	.02	.05	.01	.02	.01	.....	.01	.....	.....
21. Scorbutus	.....	.....	.....	.....	.01	.....	.....	1.6	.....	.8	.01	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.005	.....	.....
22. Syphilis	25.43	23.05	25.36	47.3	6.6	4.4	3.2	20.1	5.5	15.6	9.42	7.35	.....	.....	.....	.07	.....	.....	.....	.00	.....	.003	.....	.....
23. Trachoma	.76	.....	.74	.1	.05	.37	.....	3.8	.....	6.1	.....	.35	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
24. Tuberculosis pulmonum	4.31	8.65	4.44	2.0	4.7	1.6	1.7	1.5	6.03	2.8	6.93	5.67	.31	3.84	.42	.23	.37	.12	.26	.48	.60	.59	.94	.57
25. Tuberculosis ceterorum organorum	.44	.96	.46	.4	1.9	.39	.20	3.1	.95	1.4	.18	.57	.11	.....	.11	.05	.29	.08	.06	.29	.03	.09	.02	.17
26. Typhus abdominalis	3.61	.96	3.53	6.3	5.3	.79	.93	2.1	.74	5.1	3.68	3.10	.20	.....	.19	1.14	.69	.08	.09	.32	.17	.85	.94	.40
27. Typhus exanthematicus	.....	.....	.....	.....	.....	.....	.....	.0	.....	.4	.01	.....	.....	.....	.....	.....	.....	.....	.....	.00	.....	.05	.....	.....
28. Ulcus molle (including adenitis venerea)	34.38	48.03	34.78	(b)	2.1	2.5	1.0	10.9	(b)	11.8	27.95	.94	.....	.....	.....	(b)	.....	.....	.....	.....	(b)	.....	.....	.....

29. Variola	.12		.11		.4	.04			.0		.2	.51	.02				.02							.03	.02
30. Morbi auris	9.06	1.92	8.85	9.0	6.5	12.1	15.1	16.5	19.8	17.4	5.12	16.24	.03		.03		.03		.02	.03	.01	.03	.20	.02	
31. Morbi cordis	2.79	2.88	2.79	8.0	3.7	3.4	3.1	3.6	2.5	3.5	4.88	5.64	.34		.33		.35	.03	.03		.05	.03	.06	.12	.05
32. Morbi cutis	21.53	5.76	21.06	34.6	20.6	14.4	9.5	153.4	170.1	30.6	42.66	21.87									.04	.03	.04	.05	
33. Morbi mentis	1.73	3.84	1.79	1.0	.44	.98	1.4	.7	1.6	.6	.51	1.78					.02				.00		.01		
34. Morbi oculi	16.37	15.37	16.34	7.8	6.2	14.3	12.5	30.1	34.7	16.5	10.63	18.45													
35. Morbi systemat. urin. et sexual (excluding venerie et syphilis)	16.93	17.29	16.94	12.6	9.3	5.1	5.4	13.4	10.7	7.4	6.08	6.74	.06	.96	.08		.12	.05	.04	.05	.07	.07	.01	.11	.05

[a] All; acute bronchitis and lobar pneumonia not tabulated separately.

[b] Diseases not reported in table.

INTERNATIONAL MILITARY MEDICAL STATISTICS FOR THE YEAR 1907.

The following tables are those agreed upon at the International Commission for the Unification of the Medical Statistics of Armies held at Budapest in 1894 and modified by the last meeting, held at Madrid in 1903. They are calculated for the United States Army proper (white and colored) and include enlisted men only. Dispositions include cases remaining from last year, but do not include cases remaining at the close of the current year. Deaths include suicides and accidents. Days lost include those lost this year by cases remaining from last year.

Table I shows in absolute numbers, by departments, the mean strength of the command, the admissions to quarters, to hospital, and total admissions; the disposition of the sick, total, and the number returned to duty, died, and otherwise disposed of, and the total number of days of sickness.

Table II gives the same data in ratios per 1,000, and also shows the days lost per soldier and per admission.

Table III shows, by arms of service, the mean strength, the total admissions, and those to hospital only, the total dispositions, and the number of those returned to duty, and the number that died.

Table IV gives the same data as Table III by months.

Table V shows for each of 45 of the larger garrisons the mean strength, admissions to hospital, total admissions, and the deaths.

Table VI shows for each of the 35 diseases or disease groups agreed upon by the International Commission the number remaining under treatment at the commencement and close of the current year, the admissions and dispositions for the year, the total sick days, and the average number of days per case.

Table VII shows the admissions by arms of service, for the diseases and disease groups referred to in Table VI.

Table VIII shows the same data as Table VII by months.

Table IX shows deaths by rank, by length of service, and by age.

Table X shows the same data as Table IX for discharges for physical disability.

INTERNATIONAL TABLE I.—*Movement of sick, by army corps (departments), absolute numbers.*

Department.	Mean strength.	Admitted sick.			Sick disposed of.				
		Total.	To hospital.	To quarters.	Returned to duty (recovered).	Died.	Otherwise disposed of.	Total.	Total days sick.
United States (excluding Alaska):									
Department of the East	10,549	12,468	8,680	3,788	11,996	51	457	12,504	132,269
Department of the Gulf	2,967	4,010	2,637	1,373	3,894	5	143	4,042	53,206
Department of the Lakes	2,448	3,275	2,788	487	3,010	12	213	3,235	41,144
Department of the Missouri	6,719	8,235	6,252	1,983	7,755	37	357	8,149	95,435
Department of Dakota	1,396	1,707	1,554	153	1,635	6	62	1,703	19,459
Department of Texas	2,618	2,641	2,070	571	2,546	15	92	2,653	32,035
Department of the Colorado	1,691	1,956	1,619	337	1,837	9	63	1,909	20,187
Department of California	3,602	3,278	1,518	1,760	2,412	15	60	2,487	24,094
Department of the Columbia (excluding Alaska)	2,622	2,930	2,496	434	2,798	27	116	2,941	41,456
General hospitals	520	676	585	91	1,512	26	561	2,099	120,531
Total	35,132	41,176	30,199	10,977	39,395	203	2,124	41,722	579,836

INTERNATIONAL TABLE I.—*Movement of sick, by army corps (departments), absolute members*—Continued.

Department.	Mean strength.	Admitted sick. Total.	To hospital.	To quarters.	Sick disposed of. Returned to duty (recovered).	Died.	Otherwise disposed of.	Total.	Total days sick.
Alaska	847	557	351	206	532	3	10	545	6,561
The Philippines Division:									
Department of Luzon	5,586	8,846	6,515	2,331	8,014	31	223	8,268	97,850
Department of the Visayas	2,514	3,963	3,214	749	3,656	25	100	3,781	52,177
Department of Mindanao	3,479	4,358	3,992	366	4,161	14	89	4,264	57,629
General hospital and inter-island transports	120	184	151	33	723	11	38	772	29,281
Total	11,699	17,351	13,872	3,479	16,554	81	450	17,085	236,937
Cuba	4,436	5,165	3,110	2,055	4,994	25	106	5,125	63,293
Hawaii	192	185	177	8	186	....	2	188	2,482
Army transports	1,497	1,112	1,049	63	964	7	21	992	17,641
United States Army	53,803	65,546	48,758	16,788	62,625	319	2,713	65,657	906,750

INTERNATIONAL TABLE II.—*Movement of sick, by army corps (departments), proportionate numbers.*

Department.	In 1,000 of mean strength. Total admissions.	Admissions to hospital.	Deaths.	In 1,000 sick disposed of. Returned to duty (recovered).	Died.	Otherwise disposed of.	Days lost. Per soldier.	Per admission.
United States (excluding Alaska):								
Department of the East	1,181.91	822.83	4.83	959.37	4.08	36.54	12.54	10.61
Department of the Gulf	1,351.53	888.78	1.69	963.38	1.24	35.38	17.93	13.27
Department of the Lakes	1,337.83	1,138.89	4.90	930.45	3.71	65.84	16.81	12.56
Department of the Missouri	1,225.63	930.50	5.51	951.65	4.54	43.81	14.21	11.59
Department of Dakota	1,222.78	1,113.18	4.30	960.07	3.52	36.41	13.94	11.40
Department of Texas	1,008.79	790.68	5.73	959.67	5.65	34.67	12.24	12.13
Department of the Colorado	1,156.71	957.42	5.32	962.28	4.71	33.00	11.94	10.32
Department of California	910.05	421.43	4.16	969.84	6.03	24.13	6.69	7.35
Department of the Columbia (excluding Alaska)	1,117.47	951.95	10.30	951.38	9.18	39.44	15.81	14.15
General hospitals	.....	.....	.....	720.34	12.39	267.27	.....	.....
Total	1,172.04	859.59	5.05	944.23	4.87	50.91	16.50	14.08
Alaska	657.62	414.40	3.40	976.15	5.50	18.35	7.75	11.78
The Philippines Division:								
Department of Luzon	1,583.60	1,166.31	5.55	969.28	3.75	26.97	17.52	11.06
Department of the Visayas	1,576.37	1,278.44	9.94	966.94	6.61	26.45	20.75	13.17
Department of Mindanao	1,252.66	1,147.46	4.02	975.84	3.28	20.87	16.56	13.22
General hospitals and inter-island transports	1,533.33	1,258.33	.....	936.53	14.25	49.22	2.61	4.12
Total	1,483.12	1,185.74	6.92	968.92	4.74	26.34	20.25	13.66
Cuba	1,164.34	701.08	5.46	974.44	4.88	20.68	14.27	12.25
Hawaii	963.54	921.87	.....	989.36	.....	10.64	12.93	13.42
Army transports	742.82	700.73	4.68	971.77	7.06	21.17	11.78	15.86
United States Army	1,218.26	906.23	5.81	953.82	4.86	41.33	16.85	13.83

INTERNATIONAL TABLE III.—*Movement of sick by arms of service.*

Arms of service.	Absolute numbers.						Proportionate numbers.				
		Sick admissions.		Sick disposed of.			Per 1,000 of mean strength.			Per 1,000 sick disposed of.	
	Mean strength.	Total.	To hospital.	Total.	Fit for duty (recovered).	Deaths.	Total sick admissions.	Admissions to hospital.	Deaths.[a]	Fit for duty (recovered).	Deaths.
Infantry	20,160	24,253	19,171	24,297	23,193	126	1,203.03	950.94	6.14	954.56	5.19
Cavalry	10,668	14,822	10,833	14,813	14,234	75	1,389.39	1,015.47	6.90	960.91	5.06
Coast Artillery	9,787	11,046	7,781	11,144	10,692	50	1,128.64	795.03	4.97	959.44	4.49
Field Artillery	3,009	3,869	2,707	3,897	3,715	8	1,285.81	899.63	2.60	953.30	2.05
Engineers	1,128	1,182	591	1,169	1,117	5	1,047.87	523.94	4.33	955.52	4.28
Ordnance	646	496	168	499	475	1	767.80	260.06	1.51	951.90	2.00
Signal Corps	1,120	1,014	576	997	968	7	905.36	514.29	6.10	970.91	7.02
Hospital Corps	3,267	2,571	2,053	2,569	2,379	11	786.96	628.40	3.30	926.04	4.28
Others	4,018	6,293	4,878	6,282	5,852	36	1,566.20	1,214.04	8.73	931.55	5.73
Total	53,803	65,546	48,758	65,657	62,625	319	1,218.26	906.23	5.81	953.82	4.86

INTERNATIONAL TABLE IV.—*Movement of sick by months.*

Month.	Absolute numbers.						Proportionate numbers.				
		Sick admissions.		Sick disposed of.			Per 1,000 of mean strength.			Per 1,000 sick disposed of.	
	Mean strength.	Total.	To hospital.	Total.	Fit for duty (recovered).	Deaths.	Total sick admissions.	Admissions to hospital.	Deaths.[a]	Fit for duty (recovered).	Deaths.
January	54,984	6,077	4,453	5,927	5,640	32	110.52	80.99	.57	951.58	5.40
February	55,294	5,370	3,832	5,411	5,157	31	97.12	69.30	.55	953.06	5.73
March	55,338	5,696	4,178	5,868	5,547	31	102.93	75.50	.55	945.30	5.28
April	54,308	5,647	4,254	5,672	5,419	27	103.98	78.33	.49	955.39	4.76
May	54,603	5,463	4,156	5,511	5,257	32	100.05	76.11	.59	953.91	5.81
June	53,390	5,258	3,812	5,361	5,138	24	98.48	71.40	.44	958.40	4.48
July	52,852	5,265	3,867	5,270	5,034	32	99.62	73.17	.59	955.22	6.07
August	52,136	5,355	3,976	5,208	4,978	20	102.71	76.26	.37	955.84	3.84
September	52,157	4,940	3,711	5,025	4,811	30	94.71	71.15	.56	957.41	5.97
October	52,591	5,335	3,907	5,345	5,130	19	101.44	74.29	.35	959.78	3.55
November	53,189	5,020	3,772	5,005	4,749	19	94.38	70.92	.35	948.85	3.80
December	54,793	6,120	4,840	6,054	5,765	22	111.69	88.33	.38	952.26	3.63
Total	53,803	65,546	48,758	65,657	62,625	319	1,218.26	906.23	5.81	953.82	4.86

[a] Ratios for deaths based on mean strength "present and absent," total, 54,949.

INTERNATIONAL TABLE V.—*Movement of sick in the larger garrisons.*

Garrisons.	Mean strength.	Total admissions.		Admissions to hospital.		Deaths.	
		Absolute number.	Per 1,000 mean strength.	Absolute number.	Per 1,000 mean strength.	Absolute number.	Per 1,000 mean strength.
Fort Leavenworth, Kans	1,852	2,328	1,257.02	1,814	979.48	5	2.70
Fort Riley, Kans	1,598	1,307	817.90	1,060	663.33	5	3.13
Presidio of San Francisco, Cal. (post)	1,099	764	695.18	.....	.....	2	1.82
Fort Sam Houston, Tex	972	921	947.53	763	784.98	7	7.20
Columbus Barracks, Ohio	811	1,365	1,683.11	1,272	1,568.43	9	11.10
Fort Slocum, N. Y	806	2,083	2,584.37	1,538	1,908.19	5	6.20
Fort Monroe, Va	789	782	991.13	529	670.47	2	2.53
Vancouver Barracks, Wash	702	884	1,160.10	819	1,074.80	8	10.50
Presidio of Monterey, Cal	726	658	906.34	485	668.04	2	2.75
Jefferson Barracks, Mo	706	1,823	2,582.15	1,231	1,743.63	12	17.00
Fort Oglethorpe, Ga	547	1,011	1,848.26	613	1,120.66	1	1.83
West Point, N. Y	554	623	1,124.55	476	859.21	1	1.81
Fort Gibbon, Alaska	216	119	550.93	81	375.00	.....	.....
Fort Liscum, Alaska	145	62	427.59	58	400.00	.....	.....
Fort William H. Seward, Alaska	140	139	992.86	93	664.29	3	21.43
Camp Columbia, Cuba (post)	1,627	1,314	807.62	443	272.28	4	2.46
Camaguey, Cuba	286	368	1,286.71	311	1,087.41	.....	.....
Cienfuegos, Cuba	283	588	2,077.74	260	918.73	8	28.27
Cardenas, Cuba	263	238	904.94	55	209.13	.....	.....
Pinar del Rio, Cuba	257	339	1,319.07	327	1,272.37	2	7.78
Matanzas, Cuba	256	305	1,191.41	186	726.56	3	11.72
Santiago, Cuba	243	295	1,213.99	254	1,045.27	.....	.....
Holguin, Cuba	233	580	1,030.90	324	1,390.56	1	4.29
Ciego de Avila, Cuba	231	246	1,064.94	168	727.27	1	4.33
Guanajay, Cuba	203	183	901.48	156	768.47	1	4.93
Honolulu, Hawaii	192	185	963.54	177	921.87	.....	.....
Fort William McKinley, Luzon, P. I	2,125	3,657	1,720.94	2,880	1,355.29	17	8.00
Jolo, Jolo, P. I	940	1,362	1,448.94	1,325	1,409.57	3	3.19
Camp Keithley, Mindanao, P. I	938	902	961.62	796	848.61	2	2.13
Camp Stotsenburg, Luzon, P. I.	932	1,556	1,669.53	1,440	1,545.06	4	4.29
Manila posts, Manila, P. I	875	805	920.00	133	152.00	1	1.14
Camp McGrath, Luzon, P. I	582	1,141	1,960.48	722	1,240.55	1	1.72
Camp Connell, Samar, P. I	574	778	1,355.40	713	1,242.16	1	1.74
Camp Jossman, Guimaras, P. I.	556	1,083	1,947.84	1,041	1,872.30	7	12.59
Camp Overton, Mindanao, P. I.	375	370	986.67	338	901.33	1	2.67
Parang, Mindanao, P. I	370	639	1,727.03	532	1,437.84	1	2.70
Malabang, Mindanao, P. I	366	581	1,587.43	522	1,426.23	3	8.20
Zamboanga, Mindanao, P. I	339	389	1,147.49	377	1,112.09	4	11.80
Camp Bumpus, Leyte, P. I	291	455	1,563.57	341	1,171.82	6	20.62
Camp Wallace, Luzon, P. I	256	413	1,613.28	370	1,445.31	2	7.81
Camp Wilhelm, Luzon, P. I	252	434	1,722.22	354	1,404.76	3	11.90
Cebu, Cebu, P. I	237	329	1,388.19	323	1,362.87	2	8.44
Warwick Barracks, Cebu, P. I	232	327	1,409.48	321	1,383.62	2	8.62
Camp Downes, Leyte, P. I	220	439	1,995.45	367	1,668.18	3	13.64
Camp Daraga, Luzon, P. I	214	382	1,785.05	329	1,537.38	.....	.....

INTERNATIONAL TABLE VI.—*Movement of sick according to most important diseases.*

No. national nomenclature[a]	No. international nomenclature.	Diseases of the international nosological table.	Absolute numbers.									Proportionate numbers.					
			Remaining at close of 1906.	Admitted in 1907.	Total remaining and admitted.	Disposed of in 1907				Remaining at close of 1907.	Total days sick in 1907.	Per 1,000 of mean strength.		Per 1,000 disposed of.			
						Fit for duty.	Died.	Otherwise.	Total.			Admissions.	Deaths.	Fit for duty.	Died.	Otherwise.	Average days of treatment.
83 and 84	1	Alkoholismus acutus, including delirium tremens	25	1,747	1,772	1,684	8	59	1,751	21	7,444	32.47	0.14	961.73	4.57	33.70	4.26
173	2	Bronchitis acuta	35	2,381	2,416	2,345	.....	35	2,380	36	14,029	44.25	.....	985.29	.....	14.71	5.89
18	3	Cholera Asiatica	.....	2	2	1	1	.....	2	.....	20	.04	.02	500.00	500.00	.....	10.00
19	4	Cholera nostras	1	3	4	4	.....	.....	4	.....	13	.06	.....	1,000.00	.....	.....	4.33
15	5	Diphtheria et croup	1	14	15	12	.....	.....	12	3	531	.26	.....	1,000.00	.....	.....	3.79
20 to 22	6	Dysenteria	95	704	799	686	3	44	733	66	28,152	13.08	.05	935.88	4.09	60.03	39.99
26	7	Erysipelas	2	44	46	43	.....	3	46	.....	764	.82	.....	934.78	.....	65.22	17.35
4, 6, and 8	8	Febris intermittens (malaria)[b]	43	2,562	2,605	2,501	.....	68	2,569	36	16,982	47.62	.....	973.53	.....	26.47	6.63
3	9	Febris recurrens	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
60 to 66	10	Gonorrhea	391	6,634	7,025	6,254	1	404	6,659	366	134,795	123.32	.02	939.18	.15	60.67	20.32
210 and 211	11	Hernia	28	211	239	177	.....	49	226	13	8,795	3.92	.....	783.19	.....	216.81	41.68
16	12	Influenza	41	2,177	2,218	2,077	1	25	2,103	115	12,966	40.46	.02	987.63	.48	11.89	5.96
316	13	Insolatio (Hitzschlag, coup de chaleur)	.....	4	4	4	.....	.....	4	.....	14	.07	.....	1,000.00	.....	.....	3.50
27	14	Meningitis cerebro-spinalis epidemica	1	34	35	9	21	5	35	.....	1,014	.63	.38	257.14	600.00	142.86	2.98
12	15	Morbilli	10	549	559	522	.....	33	555	4	9,453	10.20	.....	940.54	.....	59.46	17.22
30	16	Parotitis epidemica	.....	354	354	323	.....	17	340	14	5,133	6.58	.....	950.00	.....	50.00	14.50
177	17	Pleuritis	13	162	175	148	3	14	165	10	4,344	3.01	.05	896.97	18.18	84.85	26.81
176	18	Pneumonia crouposa sive lobaris	13	135	148	99	24	7	130	18	3,581	2.51	.44	761.54	184.61	53.85	26.53
73 and 74	19	Rheumatismus articulorum	60	704	764	654	.....	59	713	51	21,049	13.08	.....	917.25	.....	82.75	29.90
13	20	Scarlatina	.....	16	16	12	.....	1	13	3	426	.30	.....	923.08	.....	76.92	26.62
76	21	Scorbutus	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
54 to 57	22	Syphilis	168	1,556	1,724	1,449	3	130	1,582	142	56,091	28.92	.05	915.93	1.89	82.18	36.05
112	23	Trachoma	3	40	43	36	.....	6	42	1	953	.74	.....	857.14	.....	142.86	23.82
47 and 48	24	Tuberculosis pulmonum[c]	131	247	378	28	24	188	240	138	49,053	4.59	.44	116.67	100.00	783.33	198.60
49 to 53	25	Tuberculosis ceterorum organorum	11	30	41	19	5	12	36	5	3,036	.56	.09	527.78	138.89	333.33	101.20
1	26	Typhus abdominalis	73	208	281	229	16	15	260	21	15,501	3.87	.29	880.77	61.54	57.69	74.52
2	27	Typhus exanthematicus	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
58 and 59	28	Ulcus molle (including adenitis venerea)	153	2,389	2,542	2,305	.....	86	2,391	151	53,171	44.40	.....	964.03	.....	35.97	22.26
11	29	Variola	1	5	6	5	.....	1	6	.....	203	.09	.....	833.33	.....	166.67	40.60
132 to 136	30	Morbi auris	22	541	563	483	1	51	535	28	9,022	10.06	.02	902.80	1.87	95.33	16.68
137 to 139	31	Morbi cordis[d]	17	138	155	78	17	48	143	12	7,150	2.56	.31	545.45	118.88	335.67	51.81

258, 260–266, 268, 270, and 271.	32	Morbi cutis *e*	37	1,379	1,416	1,345	.....	38	1,383	33	12,778	25.63	....	972.52	.....	27.48	9.27
100	33	Morbi mentis *f*	10	101	111	9	.....	89	98	13	5,605	1.88	.....	91.84	.....	908.16	55.50
111 to 131	34	Morbi oculi	41	859	900	801	.....	56	857	43	12,502	15.97	.....	934.66	.....	65.34	14.55
229 to 248	35	Morbi systemat. urin. et sexual (excluding venerie et syphilis)	35	926	961	841	3	79	923	28	16,139	17.21	.05	911.16	3.25	85.59	17.43

a Numbers to nomenclature used in 1907.
b Malarial fever, intermittent only.
c Includes tuberculosis of lungs and larynx.
d Includes pericarditis and endocarditis.
e Includes diseases of the skin proper.
f Includes insanity only.

INTERNATIONAL TABLE VII.—*Most important diseases, by arms of service.*

No. national nomenclature.[a]	No. international nomenclature.	Diseases of the international nosological table.	Absolute numbers—Admissions by arms of service.								Proportionate numbers—Admissions per 1,000 of mean strength.							
			Infantry.	Cavalry.	Coast Artillery.	Field Artillery.	Engineers.	Ordnance.	Signal Corps.	Hospital Corps.	Others.	Infantry.	Cavalry.	Coast Artillery.	Field Artillery.	Engineers.	Ordnance.	Signal Corps.	Hospital Corps.	Others.
83 and 84	1	Alkoholismus acutus, including delirium tremens	764	217	436	45	45	19	32	102	87	37.90	20.34	44.55	14.96	39.89	29.41	28.57	31.22	21.65
173	2	Bronchitis acuta	774	504	585	123	46	37	41	81	190	38.39	47.24	59.78	40.88	40.78	57.28	36.61	24.79	47.29
18	3	Cholera Asiatica	2									.10								
19	4	Cholera nostras	1		2							.05		.20						
15	5	Diphtheria et croup	6	5	2						1	.30	.47	.20						.25
20 to 22	6	Dysenteria	471	62	23	20	22	1	17	78	10	23.36	5.81	2.35	6.65	19.50	1.55	15.18	23.87	2.49
26	7	Erysipelas	20	7	9				2	2	4	1.00	.66	.92				1.79	.61	1.00
4, 6, and 8½	8	Febris intermittens (malaria)[b]	1,122	589	292	203	63	9	15	113	156	55.65	55.21	29.84	67.46	55.85	13.93	13.39	34.59	38.83
3	9	Febris recurrens																		
60 to 66	10	Gonorrhea	2,665	1,588	1,056	407	89	12	98	198	521	132.19	148.86	107.90	135.26	78.90	18.58	87.48	60.61	129.66
210 and 211	11	Hernia	68	26	33	5	7	3	2	17	50	3.37	2.44	3.37	1.66	6.21	4.64	1.79	5.20	12.45
16	12	Influenza	483	444	637	65	26	53	45	122	302	23.96	41.62	65.09	21.60	23.05	82.04	40.18	37.34	75.16
316	13	Insolatio (Hitzschlag, coup de chaleur)	4									.20								
27	14	Meningitis cerebro-spinalis epidemica	5	2	3					1	23	.25	.19	.31					.31	5.72
12	15	Morbilli	184	49	65	50	10		10	25	156	9.13	4.59	6.64	16.64	8.87		8.93	7.65	38.83
30	16	Parotitis epidemica	142	60	69	6	1	2	1	16	57	7.04	5.62	7.05	1.99	.89	3.10	.89	4.90	14.19
177	17	Pleuritis	66	22	33	11	4	2		14	10	3.27	2.06	3.37	3.66	3.55	3.10		4.29	2.49
176	18	Pneumonia crouposa sive lobaris	69	24	15	5	2			3	17	3.42	2.25	1.53	1.66	1.77			.92	4.23
73 and 74	19	Rheumatismus articulorum	272	131	157	36	10	8	11	33	46	13.49	12.28	16.04	11.96	8.87	12.38	9.82	10.10	11.45
13	20	Scarlatina		1					3	3	9		.09					2.68	.92	2.24
76	21	Scorbutus																		
54 to 57	22	Syphilis	694	347	246	103	23	3	19	42	79	34.42	32.53	25.14	34.23	20.39	4.64	16.96	12.86	19.66
112	23	Trachoma	7	8	2	2				3	18	.35	.75	.20	.66				.92	4.48
47 and 48	24	Tuberculosis pulmonum[c]	94	47	46	10	6	3	5	28	8	4.66	4.41	4.70	3.32	5.32	4.64	4.46	8.57	1.99
49 to 53	25	Tuberculosis ceterorum organorum	9	6	2	2	1			8	2	.45	.56	.20	.66	.89			2.45	.50
1	26	Typhus abdominalis	72	51	23	15	6		4	14	23	3.57	4.78	2.25	4.99	5.32		3.57	4.29	5.74
2	27	Typhus exanthematicus																		
58 and 59	28	Ulcus molle (including adenitis venerea)	1,054	626	311	184	28	4	36	52	94	52.28	58.68	31.78	61.16	24.82	6.19	32.14	15.92	23.39

11	29	Variola	2	1	1	.....	.....	.....	.....	.....	1	.10	.09	.10	.....	.....	.....	.....	.....	.25
132 to 136	30	Morbi auris	221	113	89	20	4	2	4	25	63	10.96	10.59	9.09	6.65	3.55	3.10	3.57	7.65	15.68
137 to 139	31	Morbi cordis[d]	49	26	25	11	7	1	1	9	9	2.43	2.44	2.55	3.65	6.21	1.55	.89	2.75	2.24
258, 260 to 266, 268, 270, and 271.	32	Morbi cutis[e]	651	264	180	72	15	9	5	17	166	32.29	24.75	18.49	23.93	13.30	13.93	4.46	5.20	41.31
100	33	Morbi mentis[f]	38	17	13	2	3	5	3	15	5	1.88	1.59	1.33	.66	2.66	7.74	2.68	4.59	1.24
111 to 131	34	Morbi oculi	273	189	141	41	17	18	17	54	109	13.54	17.72	14.41	13.63	15.07	27.87	15.18	16.53	27.13
229 to 248	35	Morbi systemat. urin. et sexual (excluding venerie et syphilis)	316	202	165	46	33	10	12	48	94	15.67	18.93	16.86	15.29	29.26	15.48	10.71	14.69	23.39

[a] Numbers to nomenclature used in 1907.
[b] Malarial fever, intermittent only.
[c] Includes tuberculosis of lungs and larynx.
[d] Includes pericarditis and endocarditis.
[e] Includes diseases of the skin proper.
[f] Includes insanity only.

INTERNATIONAL TABLE VIII.—*Most important diseases, by months.*

Numbers of national nomenclature.[a]	Numbers of international nomenclature.	Diseases of the international nosological table.	Admissions by months.											
			January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
83 and 84	1	Alkoholismus acutus, including delirium tremens	136	130	178	134	127	149	147	127	106	147	160	206
173	2	Bronchitis acuta	316	242	191	218	168	139	131	157	156	191	195	277
18	3	Cholera Asiatica											1	1
19	4	Cholera nostras	1				1					1		
15	5	Diphtheria et croup	1	1	1	2	2		3	1	2	1		
20 to 22	6	Dysenteria	71	62	82	45	50	46	77	64	43	51	63	50
26	7	Erysipelas	5	5	8	5	6	3	3	2		3	4	
4, 6 and 8½	8	Febris intermittens (malaria) [b]	211	143	152	178	261	274	262	248	214	244	189	186
3	9	Febris recurrens												
60 to 66	10	Gonorrhea	524	440	501	602	543	567	544	633	597	553	552	578
210 and 211	11	Hernia	17	17	23	11	23	9	21	12	24	17	19	18
16	12	Influenza	382	558	302	153	135	23	19	25	23	40	36	481
316	13	Insolatio (Hitzschlag, coup de chaleur)						1	1	2				
27	14	Meningitis cerebro-spinalis epidemica	1	16	12		2			2				1
12	15	Morbilli	10	8	140	142	110	83	20	15	5	3	1	12
30	16	Parotitis epidemica	10	33	70	109	52	30	8	2	2	3	5	30
177	17	Pleuritis	18	14	20	15	7	11	10	14	8	11	16	18
176	18	Pneumonia crouposa sive lobaris	17	10	12	8	11	8	5	7	20	6	12	19
73 and 74	19	Rheumatismus articulorum	64	53	70	102	78	60	45	40	46	45	41	60
13	20	Scarlatina		5	3	2	2						1	3
76	21	Scorbutus												
54 to 57	22	Syphilis	143	120	116	134	120	110	144	125	149	127	140	128
112	23	Trachoma		1	4	5	3	2	4	6	5	5	2	3
47 and 48	24	Tuberculosis pulmonum [c]	20	21	22	26	22	21	18	23	19	20	21	14
49 to 53	25	Tuberculosis ceterorum organorum	5	3	1			4	3	3		7	2	2
1	26	Typhus abdominalis	19	8	16	21	18	21	19	27	22	16	9	12
2	27	Typhus exanthematicus												
58 and 59	28	Ulcus molle (including adenitis venerea)	181	148	173	209	159	207	195	249	232	244	184	208
11	29	Variola			1		1			2		1		
132 to 136	30	Morbi auris	57	33	45	47	46	56	42	43	37	38	50	47
137 to 139	31	Morbi cordis [d]	11	10	14	9	13	18	10	18	8	13	7	7
258, 260 to 266, 268, 270 and 271.	32	Morbi cutis [e]	108	78	117	93	123	121	154	125	123	140	100	97
100	33	Morbi mentis [f]	13	7	6	10	7	8	7	11	8	9	8	7
111 to 131	34	Morbi oculi	68	63	64	104	75	82	66	75	57	67	56	82
229 to 248	35	Morbi systemat. urin. et sexual (excluding venerie et syphilis).	77	78	82	84	84	56	65	86	63	76	90	85

[a] Numbers to nomenclature used in 1907.
[b] Malarial fever, intermittent only.
[c] Includes tuberculosis of the lungs and larynx.
[d] Includes pericarditis and endocarditis.
[e] Includes all diseases of the skin proper.
[f] Includes insanity only.

INTERNATIONAL TABLE IX.—*Deaths, by rank, by length of service, and by age.*

Cause of death.	Total number of deaths (enlisted men).		Deaths, by rank and length of service.				Deaths, by age.					
	Absolute numbers.	Per 1,000 of mean strength.	Noncommissioned officers.	Soldiers in first year of service.	Soldiers in second year of service.	Soldiers in third year of service and beyond.	20 and under.	21 to 25.	26 to 30.	31 to 35.	36 to 40.	41 and over.
Death from sickness—Soldiers present with troops	136	2.47	33	41	9	53	8	54	25	18	8	23
Death from sickness—Soldiers absent from troops	53	.96	13	7	5	28	1	18	13	5	5	11
Accidental deaths—Soldiers present with troops	79	1.44	13	17	9	40	3	31	16	15	8	6
Accidental deaths—Soldiers absent from troops	7	.13	2	1	1	3	....	2	1	1	1	2
Suicides—Soldiers present with troops	25	.45	8	1	3	13	1	5	4	6	....	9
Suicides—Soldiers absent from troops	[a] 1	.02	.....	.....	.....	1	....	.....	....	1	....	....
Grand total	301	5.48	69	67	27	138	13	110	59	46	22	51

[a] Suicide by drowning while insane.

INTERNATIONAL TABLE X.—*Discharges from the army for physical disability, temporary or permanent, by rank, length of service, and by age.*

Cause of discharge.	Total discharges (enlisted men).		Rank and length of service.				Age.					
	Absolute numbers.	Per 1,000 of mean strength.	Noncommissioned officers.	Soldiers in first year of service.	Soldiers in second year of service.	Soldiers in third year of service and beyond.	20 and under.	21 to 25.	26 to 30.	31 to 35.	36 to 40.	41 and over.
Physical disability existent prior to enlistment	343	6.24	2	264	47	30	44	227	49	20	3	....
Physical disability incident to service	557	10.14	96	88	107	266	25	218	168	72	43	31
Physical disability not incident to service	207	3.77	4	89	39	75	9	126	46	17	5	4
Grand total	1,107	20.15	102	441	193	371	78	571	263	109	51	35

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FISCAL YEAR ENDED JUNE 30, 1909

REPORT OF THE

SURGEON-GENERAL

U. S. ARMY

TO THE SECRETARY OF WAR

1909

WASHINGTON
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1909

WASHINGTON
GOVERNMENT PRINTING OFFICE
1909

LETTER OF SUBMITTAL.

War Department,
Office of the Surgeon-General,
Washington, October 25, 1909.

Sir: I have the honor to submit herewith a report upon the work of the Medical Department of the Army, together with a financial statement for the fiscal year ending June 30, 1909, and a study of the health and sanitary conditions of the army for the calendar year 1908.

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REPORT OF THE SURGEON-GENERAL OF THE ARMY.

HEALTH OF THE ARMY.

OFFICERS.

(See Table No. 69.)

The mean strength of officers was 3,637 as obtained from the returns of the Medical Department and 3,920 from The Adjutant-General.

There were 2,093 admissions, 19 deaths, and 106.98 constantly noneffective from all causes, equal to ratios of 575.47, 4.85, and 29.41; the ratio for admissions being lower than for any year since statistics have been compiled separately for officers. The death and constantly noneffective rates were slightly higher than for 1907.

The principal causes of admission in the order of their importance were influenza 50.04, diarrhea and enteritis 39.90, bronchitis 32.17, and malaria, 25.30.

Tuberculosis caused 2 deaths, typhoid fever 2 deaths, and chronic nephritis 2 deaths; no other disease caused more than 1 death. There were 6 deaths from accident.

OFFICERS RETIRED.

Fifty officers were retired on account of disability during the year, making a rate of retirement for disability of 12.76 per 1,000, by comparison with which it may be noted that the discharge rate for disability in enlisted men is 18.48. No officer was retired on account of wounds or injuries.

The following are the principal diseases for which retirements were made:

Organic diseases of the heart	8
Tuberculosis of lungs	6
Neurasthenia	5
Chronic nephritis	4
Enteritis, chronic	3
Dysentery, amoebic	2
Rheumatism, chronic	2
Locomotor ataxia	2
Cirrhosis of liver	2
Other diseases	16
	50

TEST EXERCISES FOR FIELD OFFICERS.

In the report of this office for 1905 it was recommended that a progressive system of physical training under the supervision of medical officers should be adopted by the army, so that its personnel might be at all times physically fit for active service. This recommendation was approved by the Secretary of War, but has not thus far been carried into effect. Since that time an annual physical examination has been required for all officers of the army and a physical test in addition for those who have reached the grade of field officer. The object sought to be attained by this test is "a physical condition which would enable them to be always fit for active field service." It is believed that the present test not only fails in this purpose, but may result in serious damage to elderly officers. Its defect is that it requires officers to be fit only once a year. It is believed that officers should be required to be physically fit all the time, and as this can only be accomplished by constant physical training it is recommended that a certain amount of physical exercise be required of all officers at all times.

This is practically a very difficult problem to solve, especially in the case of staff officers and line officers doing office work at headquarters and other stations where there are no troops and no facilities for the proper care of mounts. The constant and unexpected changes of station to which officers are subjected under present service conditions also act as a material discouragement to the purchase of good private horses. It would seem, therefore, that the first step toward inducing field officers to ride regularly would be the providing by the Government of mounts and orderlies for them wherever they may be stationed as is understood to be customary for mounted officers in European armies. After such provision is made, a standard of physical fitness could be readily maintained either by monthly test rides or by requiring a certain minimum distance to be ridden monthly.

I concur in the suggestions made by General Barry in his report of April 1, 1909, that the test ride be modified in its requirements for those serving in the Tropics, and that for officers of 62 years or more the taking of the test ride be optional.

ENLISTED MEN.

During the year 1908 American troops were stationed in the United States proper, the Philippine Islands, Alaska, Hawaii, and Cuba, from which island the army of Cuban pacification was withdrawn during the months of February and March, 1909. Native troops served in Porto Rico and the Philippines.

Statistics for the native troops—Porto Rican and Filipino—have been separately compiled, and when reference is made to the "Army" in this report the American Army proper, white and colored troops, is meant.

As in many diseases, notably the venereal and malarial, the same soldier is often admitted several times on account of the same case of illness, the total number of admissions is necessarily considerably greater than the actual number of cases. The extent of this discrepancy for diseases and injury is 6.77 per cent, as shown in the following table, in which, however, only those diseases are shown where the difference between admissions and cases was 10 or more.

TABLE NO. 1. *Admissions and cases compared, U. S. Army, 1908.*

	Admissions and cases (men) compared.			
	Admissions.	Cases (men).	Excess of admissions over cases.	Percentage of admissions deducted to show cases.
Malarial fever	3,030	2,690	340	11.22
Influenza	1,956	1,891	65	3.32
Dysentery	480	438	42	8.75
Dengue	1,204	1,133	71	5.90
Vaccinia	2,247	2,215	32	1.42
Tuberculosis (all)	295	287	8	2.71
Syphilis	1,726	1,459	267	15.47
Chancroids	2,105	1,945	160	7.60
Gonorrhea	8,866	7,709	1,157	13.05
Acute articular rheumatism	523	461	62	11.85
Rheumatism, subacute and chronic	393	328	65	16.54
Alcoholism	1,924	1,647	277	14.40
Drug habit	56	46	10	17.86
Epilepsy	159	134	25	15.72
Neuralgia	434	404	30	6.91
Neurasthenia	126	109	17	13.49
Conjunctivitis, acute	465	447	18	3.87
Diseases of the middle and internal ear	468	427	41	8.76
Organic diseases of the heart	131	118	13	9.92
Varicocele	230	218	12	5.22
Hemorrhoids	497	479	18	3.62
Adenitis, nonvenereal	467	428	39	8.35
Functional disease of the heart	144	128	16	11.11
Coryza	1,209	1,173	36	2.98
Acute bronchitis	2,053	1,969	84	4.09
Chronic bronchitis	188	175	13	6.91
Pleurisy	212	197	15	7.08
Asthma	116	74	42	36.21
Diseases of the teeth, gums, and alveoli	600	581	19	3.17
Tonsillitis	3,635	3,459	176	4.84
Dyspepsia	1,882	1,775	107	5.69
Gastritis	794	750	44	5.54
Diarrhea, acute	2,760	2,621	139	5.04
Enteritis	691	649	42	6.08
Tenia	80	67	13	16.25
Ankylostoma duodenale	92	81	11	11.96
Hernia	309	284	25	8.09
Constipation	1,555	1,485	70	4.50
Furunculosis	2,152	1,857	295	13.71
Acute abscess, phlegmon	1,233	1,144	89	7.22
Corns and warts	343	315	28	8.16
Ingrowing nails	446	415	31	6.95
Dermatitis from poisonous plants	358	337	21	5.87
Eczema and pemphigus	266	228	38	14.29
Scabies	358	339	19	5.31
Dhobie itch	293	276	17	5.80
Synovitis	174	150	24	13.79
Muscular rheumatism and myalgia	1,727	1,607	120	6.95
Congenital malformations	185	160	25	13.51
Febricula, simple continued, and other undetermined fevers	611	589	22	3.60
Fractures	734	721	13	1.77
Dislocations	226	214	12	5.31
Sprain	3,436	3,265	171	4.98
Strain, muscular	694	665	29	4.18
Abrasions and blisters (mechanical)	1,492	1,435	57	3.82
Contusions	3,062	2,947	115	3.76
Wounds:				
Incised	1,008	994	14	1.39
Lacerated	1,297	1,267	30	2.31
Punctured	543	533	10	1.84
Gunshot	188	180	8	4.26
Heat exhaustion	135	123	12	8.89
Diseases and injuries except as shown in detail	12,641	12,199	442	3.50
Grand total	77,704	72,441	5,263	6.77
Total for diseases	62,978	58,256	4,722	7.50
Total for external causes	14,726	14,185	541	3.67

The mean enlisted strength of the army, American troops, white and colored, for the year 1908, as reported on the monthly sick reports of the Medical Department, was 65,406, and on the returns of The

Adjutant-General's office 67,515. The former represents the strength of the commands from which the sick returns were made and was used in calculating all ratios except those for deaths and discharges. As all deaths and discharges were reported, even of those absent from a command, the total strength as obtained from The Adjutant-General was used in calculating ratios pertaining to those headings. This shows a considerable increase in strength over the year 1907, for which the medical returns showed 53,803 and The Adjutant-General's office 54,949.

CONSTANTLY NONEFFECTIVE RATE.

The constantly noneffective rate, which is the true measure of the loss in efficiency of the army from sickness and injury, was 42.68 per 1,000, as compared with 46.17 for 1907 and 49.79 for 1906.

TOTAL ADMISSIONS TO SICK REPORT.

The total number of admissions to sick report was 77,704, equal to an admission rate of 1,188.03, as compared with 1,218.26 for the previous year and 1,706.33 for the preceding decade.

DEATHS FROM ALL CAUSES.

The deaths from all causes number 414, of which 235 were from disease. The death rate for all causes was 6.13 and 3.48 for disease, as compared with 5.81 and 3.44, respectively, for the preceding year.

DISCHARGES FOR DISABILITY.

The discharges for disability numbered 1,248, the rate being 18.48, as compared with 20.15 for 1907.

Gunshot wounds caused 188 admissions, with 56 deaths and 33 discharges.

Wounds other than gunshot (contused, lacerated, incised, and punctured) caused 3,439 admissions, with 6 deaths and 16 discharges.

Drowning caused 48 deaths, poisoning (acute) 29, and freezing 3. There were no deaths from sunstroke during the year. The American troops suffered no loss of killed or wounded in action during the year.

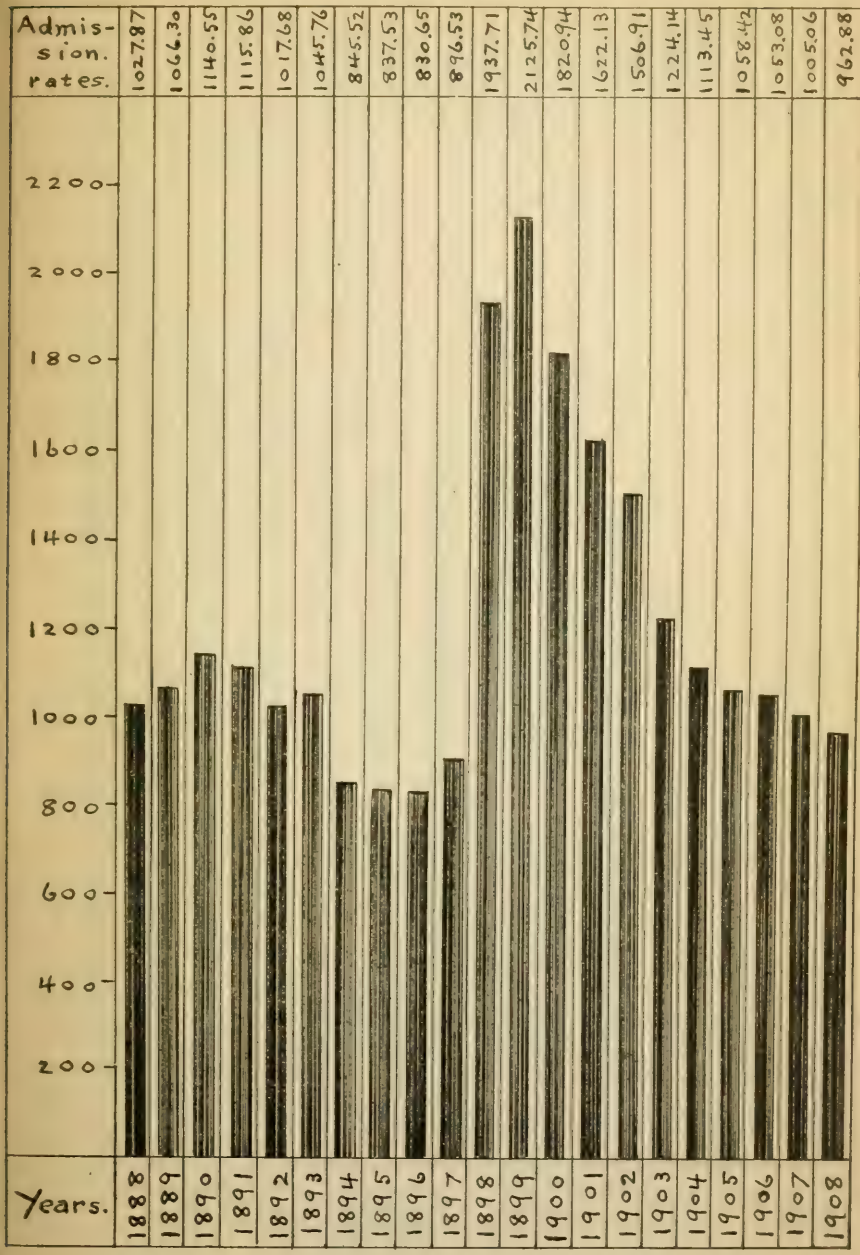
There were 39 suicides and 22 homicides.

ADMISSION RATES FOR DISEASE.

The accompanying chart, A, giving total admission rate for diseases for the two past decades, shows in a striking way the increase in sickness due to the exposures to tropical climates and conditions consequent upon the occupation of new territory during and since the Spanish-American war. It also shows a steady diminution in sickness after the first year of colonial expansion in 1898, with the rapid advance of our knowledge of tropical diseases and preventive medicine and the establishment of more sanitary conditions of living in our tropical possessions.

The progressive improvement since 1898 has been due chiefly to sanitary control of the infectious fevers—malarial, typhoid, and yellow

CHART A.—*Showing the total admission rate for disease, by years, since 1888, for the Army.*



Scale 400 to 1 inch.

CHART B.—*Showing the admission rates for venereal diseases and alcoholism in the Army, years 1897 to 1908.*

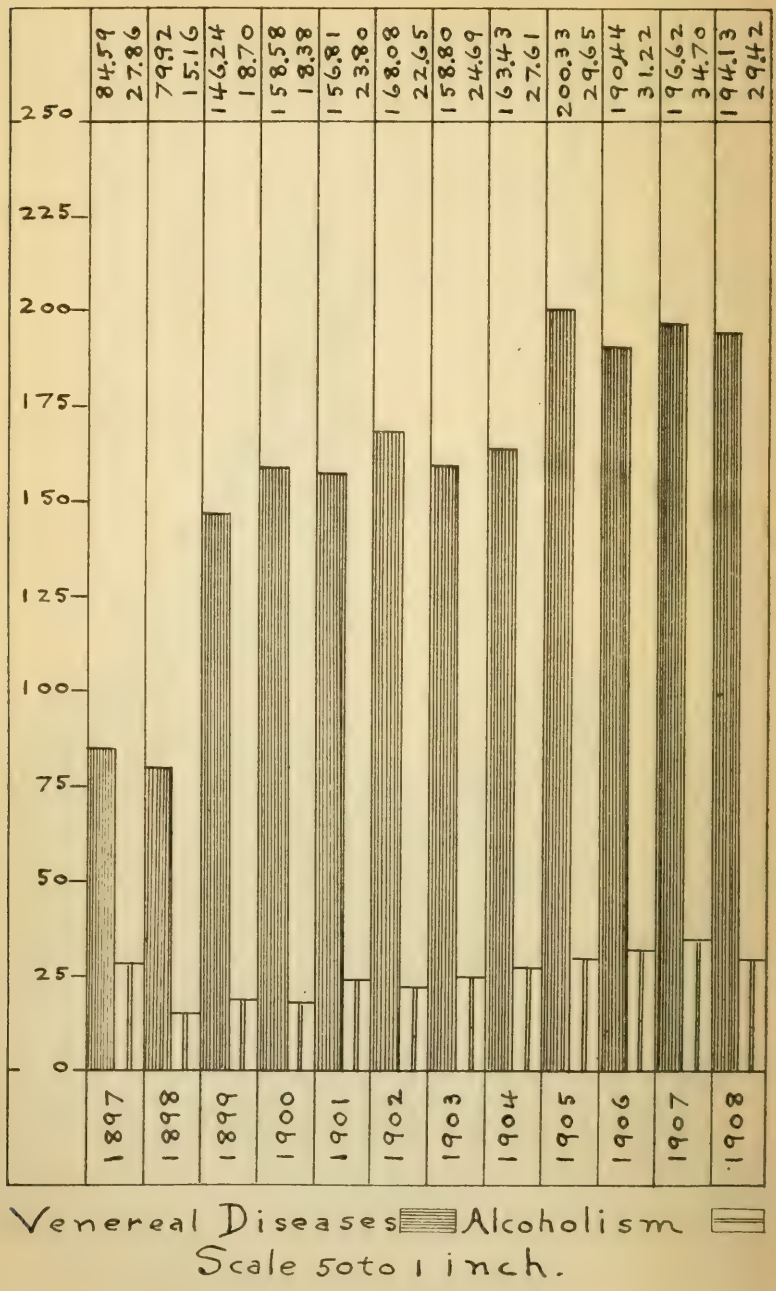


CHART C.—*Showing total death, discharge, and noneffective rates for disease, by years, since 1888, for the Army.*

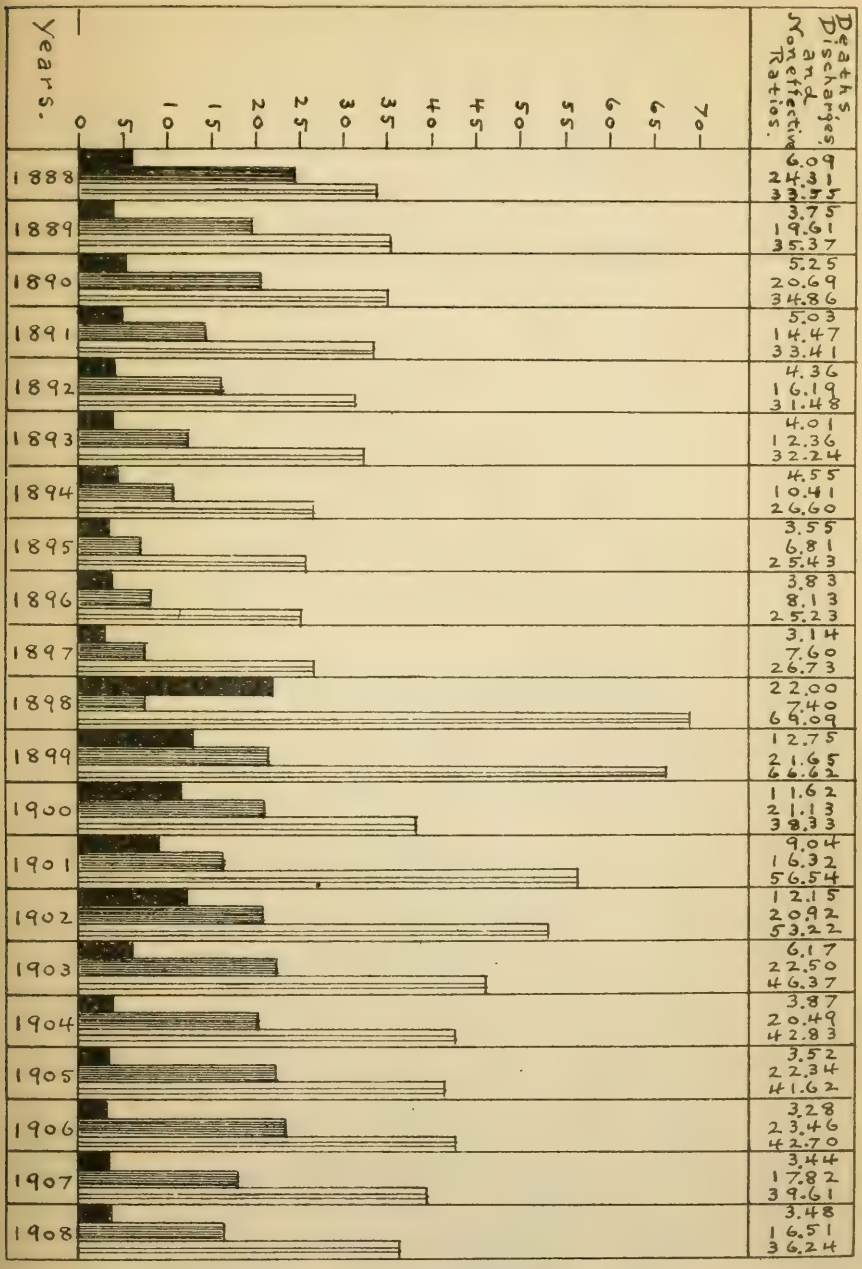
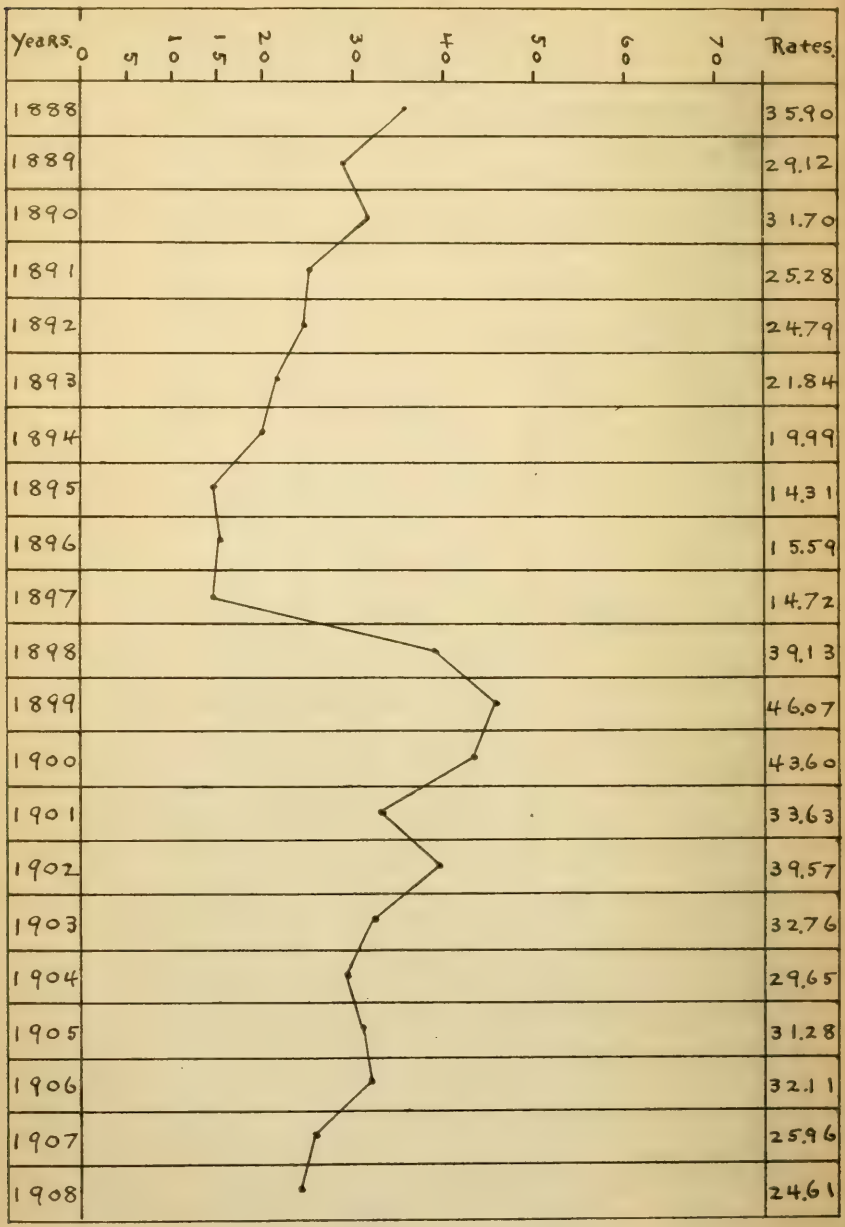


CHART D.—*Showing for the Army the rates for total losses, all causes, by years, since 1888.*



Scale 20 to 1 inch.

CHART E.—*Showing for the Army the death rates for the three diseases having the highest rates in 1908.*

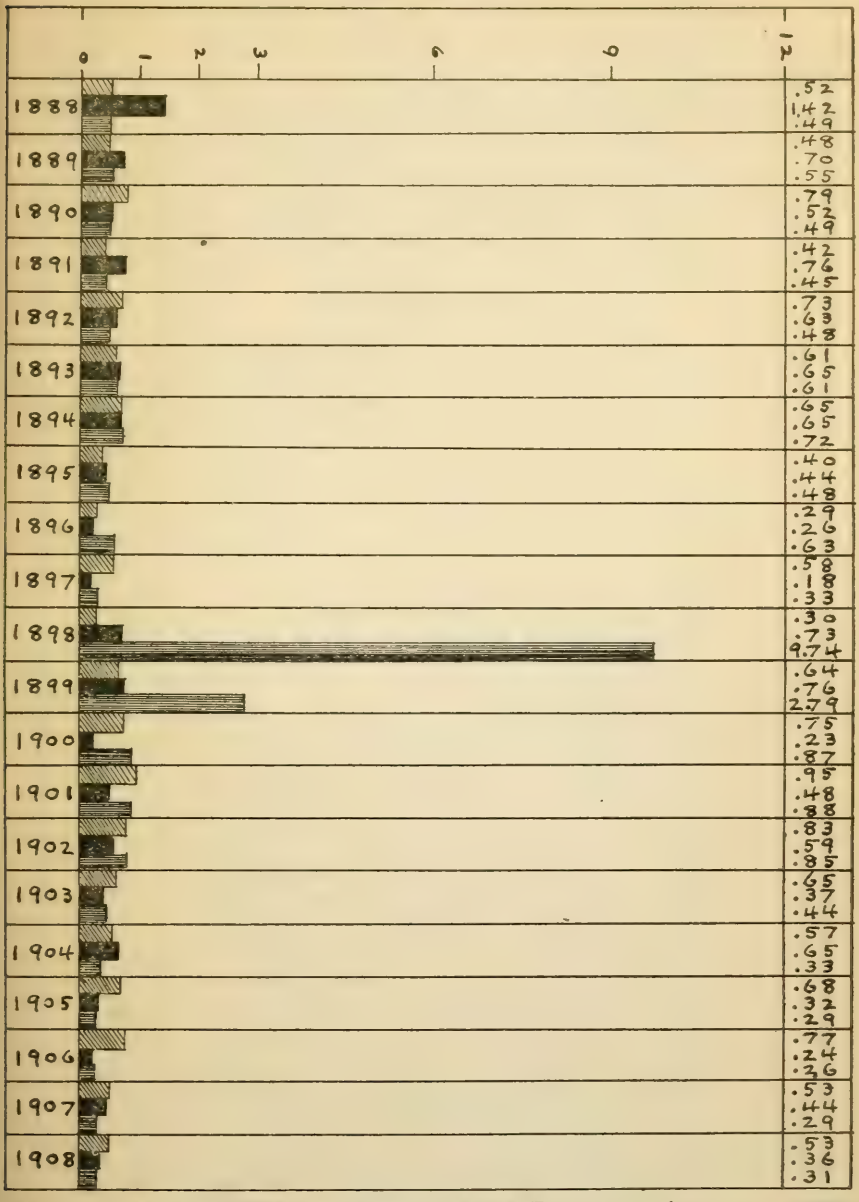


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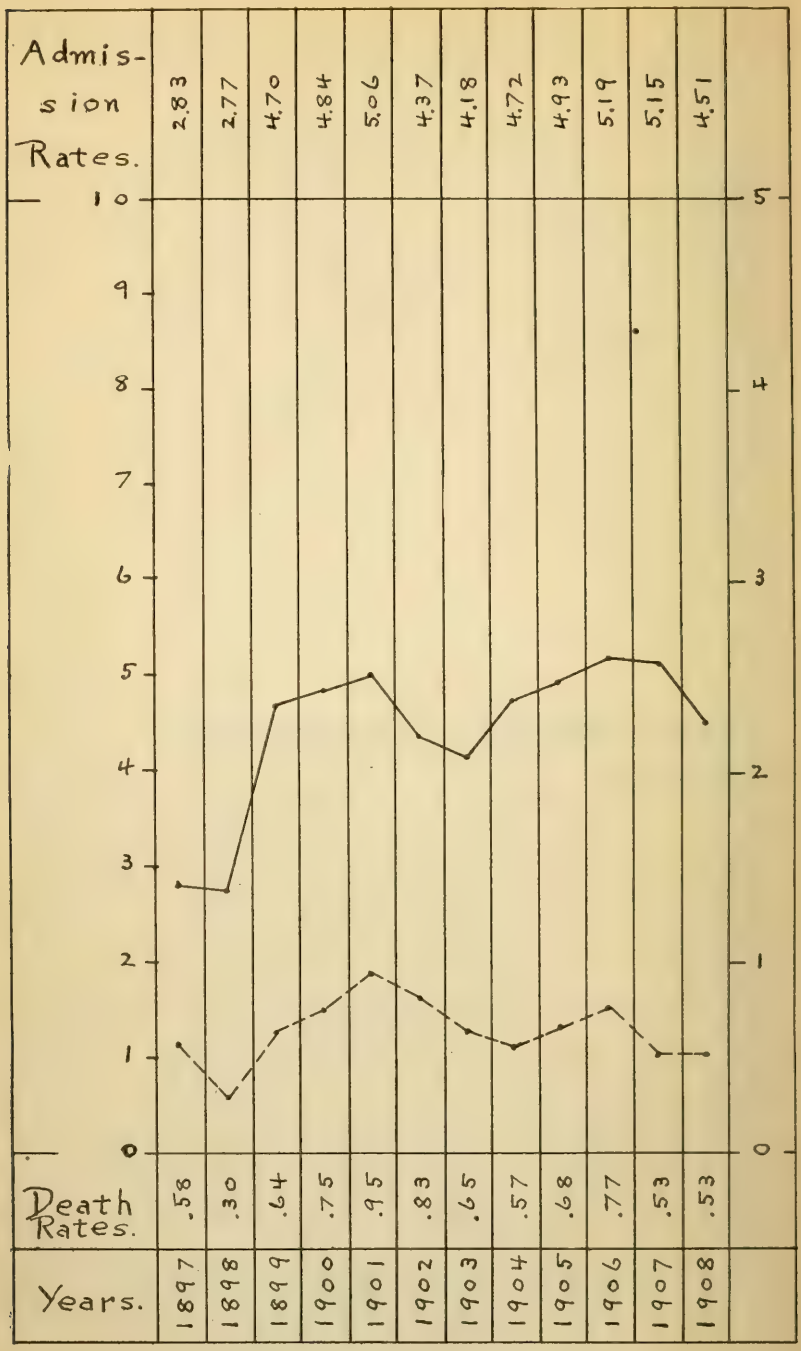
CHART F.—*Showing the relative admission and death ratios per thousand of mean strength for tuberculosis in the Army, by years, since 1897.*



Admissions_____Scale 2 to 1 inch.
Deaths_____Scale 1 to 1 inch.

fever. It would be even greater than at present if it had not been offset to a considerable extent by the formidable increase in the venereal diseases and tuberculosis.

VENEREAL DISEASE.

Venereal diseases show a slight diminution as compared with last year, but in admission rate, 194.13, and constant noneffective rate, 11.65, they still far outnumber any other disease group. They must, under our present sociological conditions and in view of the popular opposition to taking preventive measures against this special class of infectious diseases, be considered largely nonpreventable diseases so far as sanitary measures are concerned. (See Chart B.)

TUBERCULOSIS.

The increase in tuberculosis during the last decade, although not large in the number of cases as compared to other diseases, is important by reason of the high death and discharge rates of this disease and its long duration. The reasons for this increase and the steps appropriate to check it will be discussed later.

The admission rate for tuberculosis was 4.51, as compared with 5.15 for 1907, and the discharge and death rate taken together, 3.03, as against 3.75 for 1907.

MALARIA.

The great and gratifying diminution in malarial infection in recent years has been maintained this year, the admission rate having fallen from 107.67 in 1906 to 63.19 in 1907 and 46.33 in 1908. The incidence for previous years in the United States can be found in Chart O and Table 19. Malaria has this year dropped from the second place in number of admissions, which it held last year, to the third place, diarrhea and enteritis being this year second to venereal diseases, with an admission rate of 53.27, compared with 49.26 for last year.

The following tables and charts give a summary of the health of the army, by countries in which it was stationed during the year:

TABLE NO. 2.—*Numerical view of the effect of disease and injury on United States troops serving at home and abroad in the year 1908, compared with corresponding data for the year 1907, by countries—Absolute numbers.*

American troops (enlisted).		Mean strength.	Admitted.			Discharged on surgeon's certificate of disability.			Died.			Total losses.			Noneffective from sickness.	
			Total.	Disease.	Injury.	Total.	Disease.	Injury.	Total.	Disease.	Injury.	Total.	Disease.	Injury.	Days treated.	Constantly noneffective.
United States	1908	46,316	53,198	42,699	10,499	1,026	920	106	257	149	108	1,283	1,069	214	698,304	1,907.93
	1907	35,132	41,176	33,582	7,594	915	809	106	203	117	86	1,118	926	192	579,836	1,588.59
Alaska	1908	1,015	426	275	151	4	3	1	10	3	7	14	6	8	4,825	13.18
	1907	847	557	408	149	11	9	2	3	2	1	14	11	3	6,561	17.98
Cuba	1908	4,694	5,641	4,456	1,185	102	99	3	22	12	10	124	111	13	66,200	180.87
	1907	4,436	5,165	4,119	1,046	79	72	7	25	15	10	104	87	17	63,293	173.41
Philippine Islands	1908	11,971	17,234	14,459	2,775	105	83	22	113	61	52	218	144	74	233,739	638.63
	1907	11,699	17,351	14,742	2,609	100	87	13	81	50	31	181	137	44	236,937	649.14
Hawaii	1908	255	327	262	65	11	10	1	2	1	1	13	11	2	3,510	9.59
	1907	192	185	165	20	2	2	.....	.....	.....	.....	2	2	.....	2,482	6.80
Army transports	1908	1,155	878	827	51	.....	.....	.....	10	9	1	10	9	1	15,112	41.29
	1907	1,497	1,112	1,059	53	.....	.....	.....	7	5	2	7	5	2	17,641	48.33
Total	**1908**	**65,406**	**77,704**	**62,978**	**14,726**	**1,248**	**1,115**	**133**	**414**	**235**	**179**	**1,662**	**1,350**	**312**	**1,021,690**	**2,791.50**
	1907	53,803	65,546	54,075	11,471	1,107	979	128	319	189	130	1,426	1,168	258	906,750	2,484.25
Regular Army, American troops, 1898 to 1907		62,604	1,068,223	931,163	137,060	14,792	12,891	1,901	8,072	5,665	2,407	22,864	18,556	4,308	.....	.....

CHART G.—*Showing the relative admission, death, discharge, and noneffective rates per thousand of mean strength for disease, by countries.*

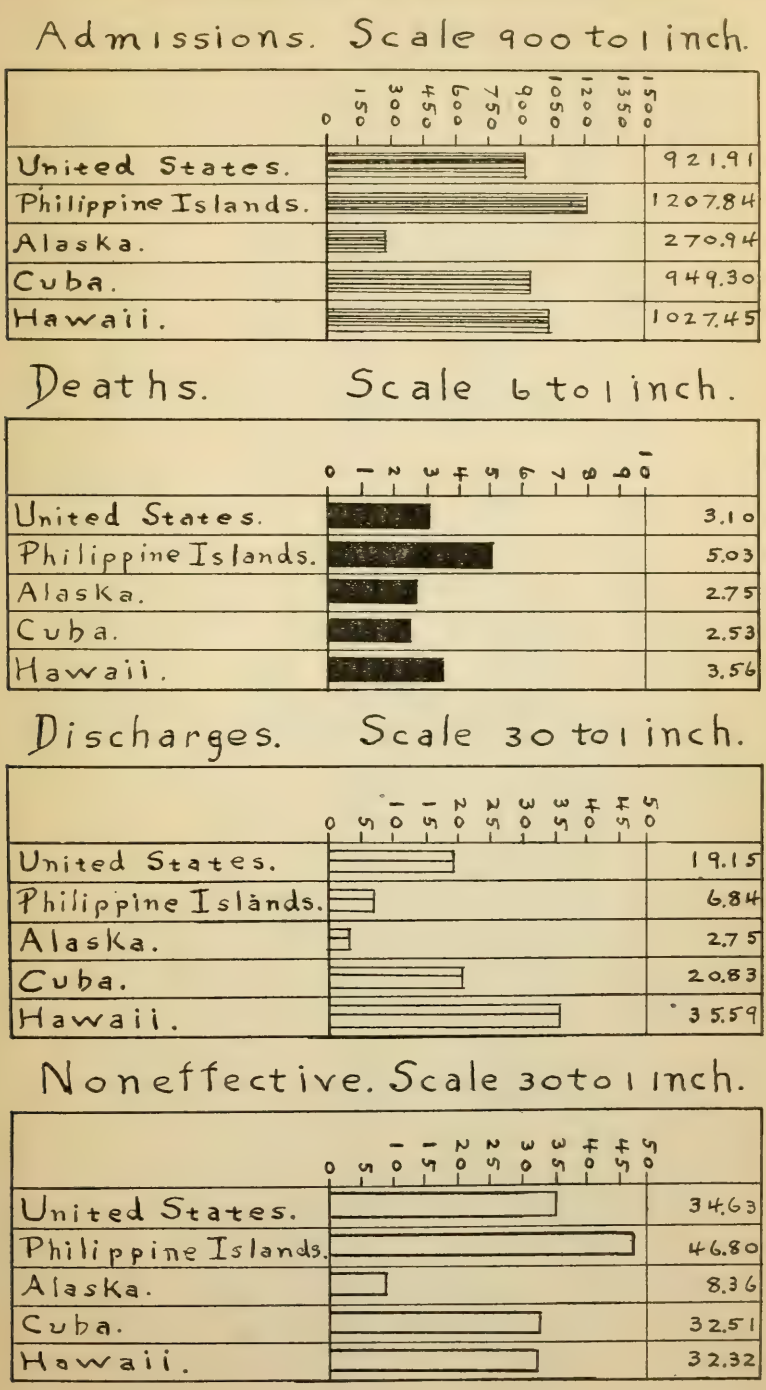
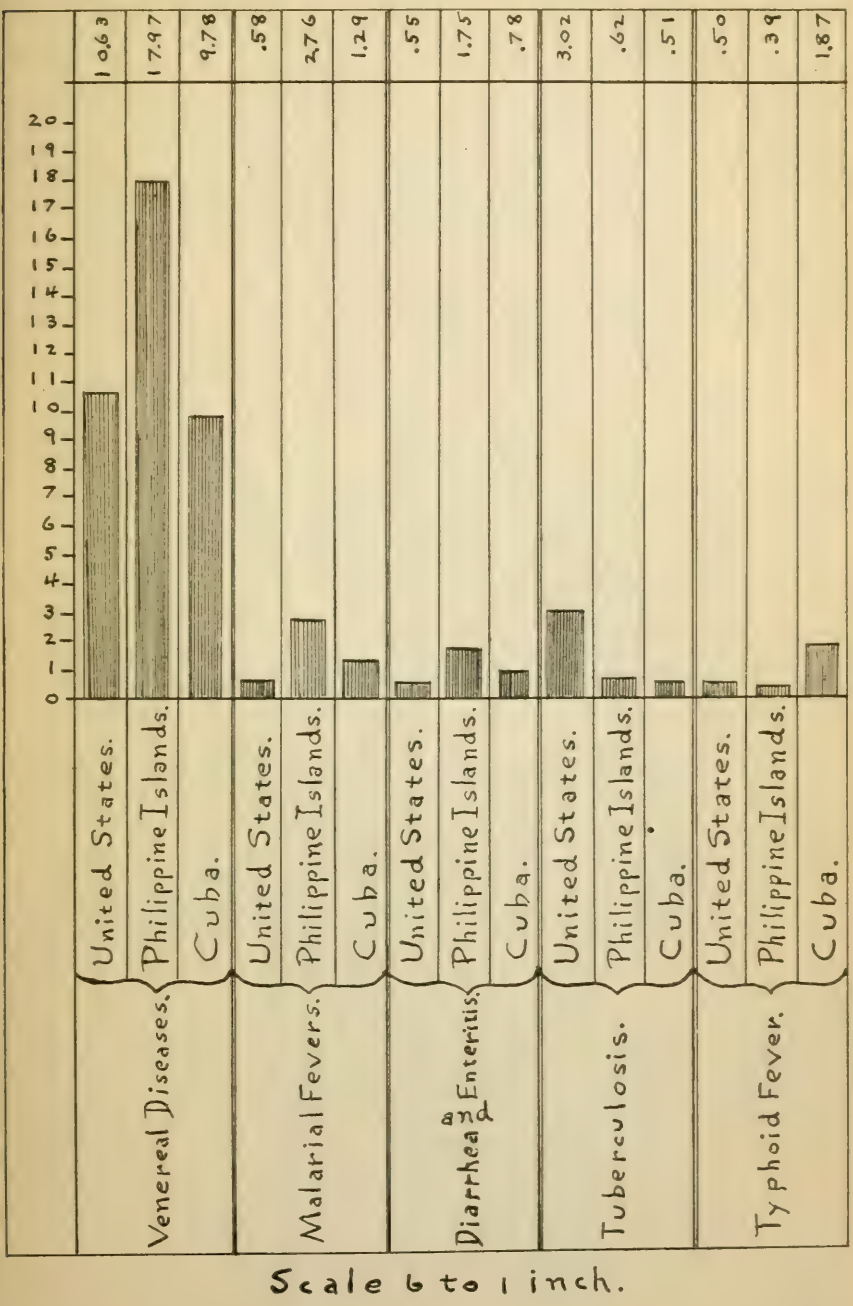

Admissions. Scale 900 to 1 inch.
0 150 300 450 600 750 900 1050 1200 1350 1500
United States. 921.91
Philippine Islands. 1207.84
Alaska. 270.94
Cuba. 949.30
Hawaii. 1027.45
Deaths. Scale 6 to 1 inch.
0 1 2 3 4 5 6 7 8 9 10
United States. 3.10
Philippine Islands. 5.03
Alaska. 2.75
Cuba. 2.53
Hawaii. 3.56
Discharges. Scale 30 to 1 inch.
0 5 10 15 20 25 30 35 40 45 50
United States. 19.15
Philippine Islands. 6.84
Alaska. 2.75
Cuba. 20.83
Hawaii. 35.59
Noneffective. Scale 30 to 1 inch.
0 5 10 15 20 25 30 35 40 45 50
United States. 34.63
Philippine Islands. 46.80
Alaska. 8.36
Cuba. 32.51
Hawaii. 32.32

TABLE NO. 3.—*Numerical view of the effect of disease and injury on United States troops serving at home and abroad in the year 1908, compared with corresponding data for the year 1907, by countries—Proportionate numbers.*

American troops (enlisted).		Mean strength.	Admitted.			Discharged on surgeon's certificate of disability.			Died.			Total losses.			Constantly noneffective.	Days treated.	
			Total.	Disease.	Injury.	Total.	Disease.	Injury.	Total.	Disease.	Injury.	Total.	Disease.	Injury.		Each soldier.	Each case.
United States	1908	46,316	1,148.59	921.91	226.68	21.35	19.15	2.21	5.35	3.10	2.25	26.70	22.24	4.46	41.19	15.08	13.13
	1907	35,132	1,172.04	955.88	216.16	25.36	22.42	2.94	5.63	3.24	2.38	30.98	25.66	5.32	45.22	16.50	14.08
Alaska	1908	1,015	419.70	270.94	148.77	3.67	2.75	.92	9.17	2.75	6.42	12.84	5.50	7.34	12.99	4.75	11.33
	1907	847	657.62	481.70	175.91	12.47	10.20	2.27	3.40	2.27	1.13	15.87	12.47	3.40	21.22	7.75	11.78
Cuba	1908	4,694	1,201.75	949.30	252.45	21.46	20.83	.63	4.63	2.53	2.10	26.09	23.36	2.73	38.53	14.10	11.74
	1907	4,436	1,164.34	928.54	235.80	17.25	15.72	1.53	5.46	3.28	2.18	22.71	19.00	3.71	39.09	14.27	12.25
Philippine Islands	1908	11,971	1,439.65	1,207.84	231.81	8.65	6.84	1.81	9.31	5.03	4.28	17.96	11.87	6.09	53.35	19.53	13.56
	1907	11,699	1,483.12	1,260.11	223.01	8.54	7.43	1.11	6.92	4.27	2.65	15.46	11.70	3.76	55.49	20.25	13.66
Hawaii	1908	255	1,282.35	1,027.45	254.90	39.15	35.59	3.56	7.12	3.56	3.56	46.27	39.15	7.12	37.61	13.76	10.73
	1907	192	963.54	859.37	104.17	10.42	10.42	.....	.....	.....	.....	10.42	10.42	.....	35.42	12.93	13.42
Army transports	1908	1,155	760.17	716.02	44.16	.....	.....	.....	8.31	7.48	.83	8.31	7.48	.83	35.75	13.08	17.21
	1907	1,497	742.82	707.41	35.40	.....	.....	.....	4.68	3.34	1.34	4.68	3.34	1.34	32.29	11.78	15.86
Total	1908	**65,406**	**1,188.03**	**962.88**	**225.15**	**18.48**	**16.51**	**1.97**	**6.13**	**3.48**	**2.65**	**24.62**	**19.99**	**4.62**	**42.68**	**15.62**	**13.15**
	1907	53,803	1,218.26	1,005.06	213.20	20.15	17.82	2.33	5.81	3.44	2.37	25.96	21.26	4.70	46.17	16.85	13.83
Regular Army, American troops, 1898 to 1907		62,604	1,706.33	1,487.40	218.93	23.02	20.06	2.96	12.56	8.82	3.75	35.58	28.88	6.71	.....	.....	.....

CHART H.—*Showing the relative noneffective ratios per thousand of mean strength of certain special diseases in the United States proper, Philippine Islands, and Cuba.*



All the deaths and discharges which occurred in the United States of troops invalided home from foreign service and whose organizations remained abroad have been assigned to the country from which the soldiers were invalided. There yet remains, however, a large number of deaths and discharges which can only be assigned to the place where they occur, though the diseases which led to these terminations were contracted in foreign service.

Alaska has, as in the preceding years, the lowest rates for admissions, discharges, and constantly noneffective; its death rate for disease being next to Cuba, which has the lowest. Cuba had also the lowest total death rate. In admission rate the United States was next greater than Alaska, while in its constantly noneffective rate it was larger than Alaska, Hawaii, and Cuba, but better than the Philippine Islands.

The Philippine Islands had the largest rates for total admissions, constantly noneffective, and deaths from all causes.

INFLUENCE OF ARM OF SERVICE.

(See International Tables III and VII.)

In these comparisons the enlisted men of the Ordnance Department and Signal Corps are not considered on account of their small number and the special character of their services.

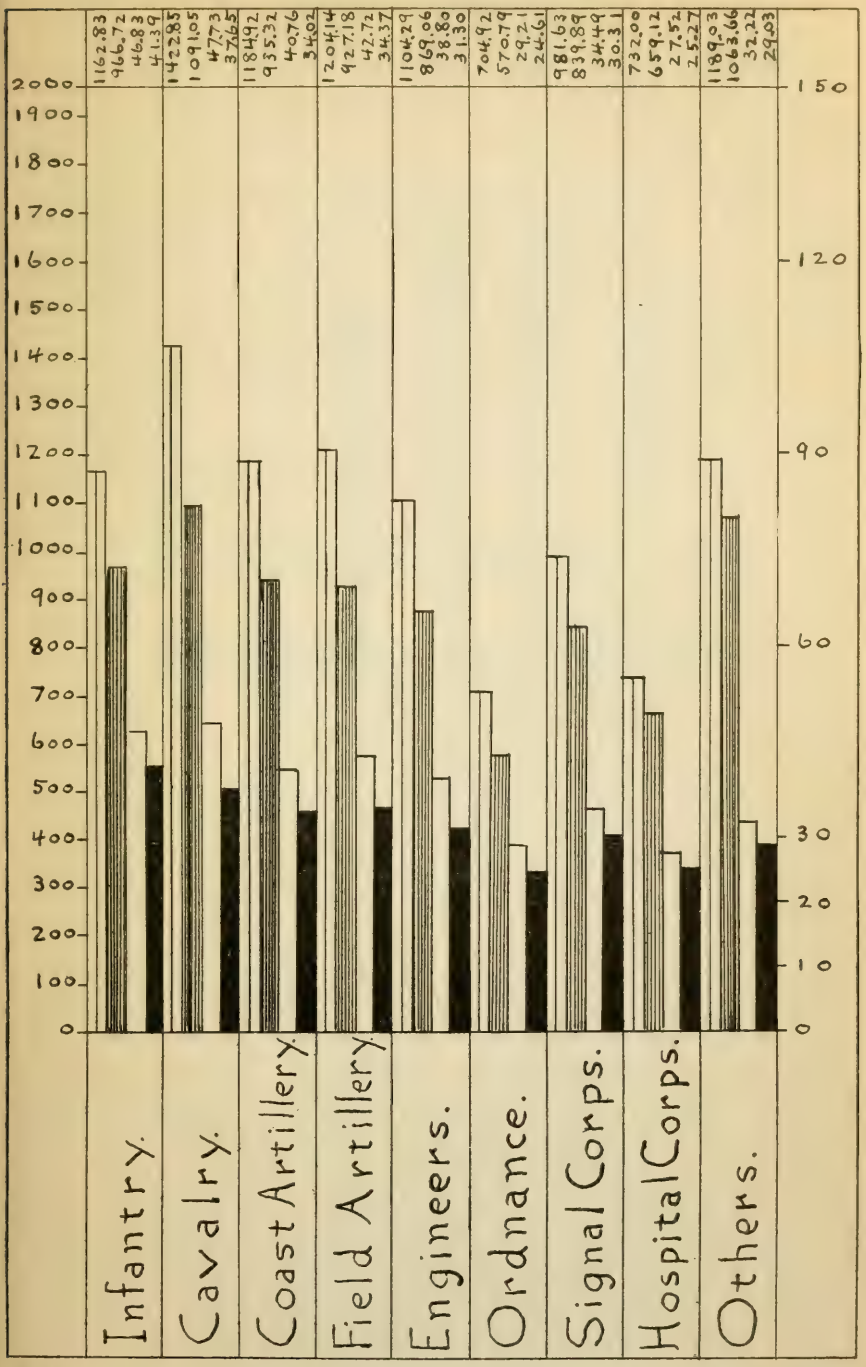
The admission rate was highest in the cavalry and lowest in the Hospital Corps; the death rate was highest in the Engineers and lowest in the Coast Artillery.

The following table shows the relative frequency of occurrence of the more important diseases for the various arms of the service. The figure 1 indicates highest ratio, and 6 the lowest, in each case for each arm.

TABLE No. 4.

Arms of service.	More important diseases.											
	Venereal diseases.	Tonsillitis and pharyngitis.	Diarrhea and enteritis.	Malaria.	Bronchitis.	Alcoholism.	Rheumatism.	Dysentery.	Tuberculosis, all forms.	Typhoid fever.	Pneumonia.	All injuries.
Cavalry	2	2	1	1	3	5	3	4	4	1	6	1
Field Artillery	3	1	5	2	5	6	2	5	5	5	2	2
Coast Artillery	5	5	4	5	1	1	4	6	3	4	5	3
Infantry	1	3	2	4	4	4	1	1	2	2	3	5
Engineers	4	4	3	3	2	2	5	3	6	6	4	4
Hospital Corps	6	6	6	6	6	3	6	2	1	3	1	6

CHART I.—*Showing the relative admission and noneffective ratios per thousand of mean strength, by arms of service, for the Army.*



INFLUENCE OF RACE.

(See Tables Nos. 67, 70, and 74).

All the rates, except those for discharges for disability, were higher for colored than for white troops, the death rate being more than twice as great.

The admission rate for venereal diseases was nearly double for the colored race and less than one-third for Filipinos as compared with the white race. Malarial fever was one-third more frequent for the colored race and five times more frequent for the Filipinos than for whites, an incidence which is somewhat surprising in view of the supposed relative immunity of the dark races to this infection. It is true, however, that a much larger proportion of Filipino than of white or colored troops were stationed in malarious localities, and they were probably not so carefully protected from mosquitoes.

Next to malarial fevers, beriberi was the most prevalent disease among Filipino soldiers with an admission rate of 121.53, while only one case of this disease occurred among white troops and none among colored.

The incidence of tuberculosis was greatest in the colored race, next in the Filipino and least in the white race; and the same was true of dysentery and cholera.

COMPARISON WITH FOREIGN ARMIES.

An effort is made in the following Charts J and K and the Tables Nos. 75 and 76 to make a comparison of the data available in the annexes to the annual reports of the medical departments of the armies of a number of foreign governments. There are, however, so many factors which are peculiar to each country that an accurate comparison is impossible. For example, in most foreign services many of the minor ailments, which in the United States Army are treated in quarters and recorded with the same accuracy and care as the hospital cases, are not made of record in the medical reports. As an instance in point it may be noted that the admission for alcoholism in the United States is nearly 22 times that of the British army, but the death rate for alcoholism in the latter is one-half that in our army. These tables show that the admission rates for alcoholism and the venereal diseases taken together are much higher in the United States Army than in any of the foreign armies included in the table. This is also true of the separate venereal diseases, with the exception of syphilis, for which the admission rate is 39.3 in the British army as compared with 23.1 in our army. For malaria, the admission rate as compared with the United States is higher in the British, Russian, and Spanish, and much lower in the French, Prussian, Bavarian, Austro-Hungarian, and Belgian armies. Pulmonary tuberculosis is higher in the French, Dutch, Spanish, and Belgian armies and lower in the British, Prussian, Bavarian, and Austro-Hungarian. In the three last named the ratio is identically the same, being 1.4.

For typhoid fever the admission rate is higher in the British, French, Russian, and Spanish armies.

CHART J.—*Showing a comparison with foreign armies of the relative total loss, death, and discharge ratios per thousand of mean strength.*

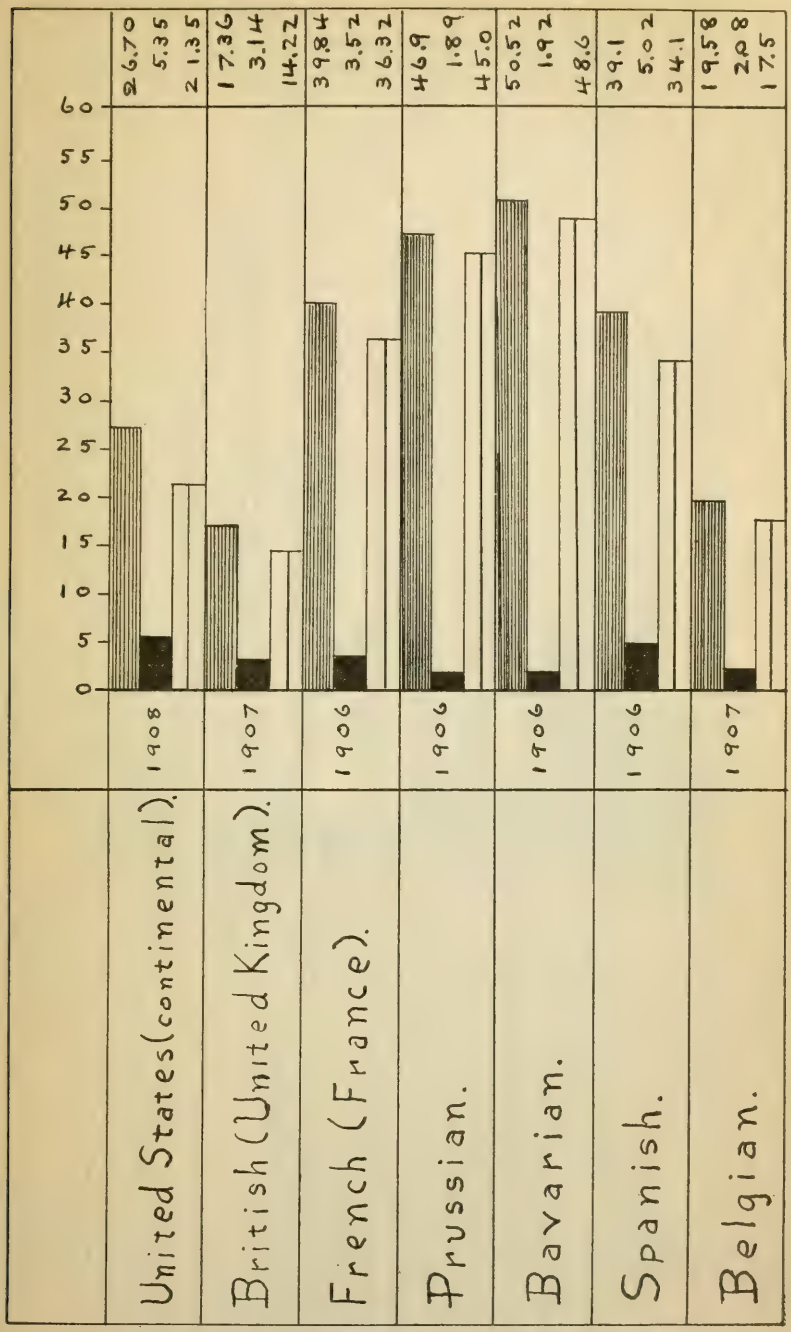
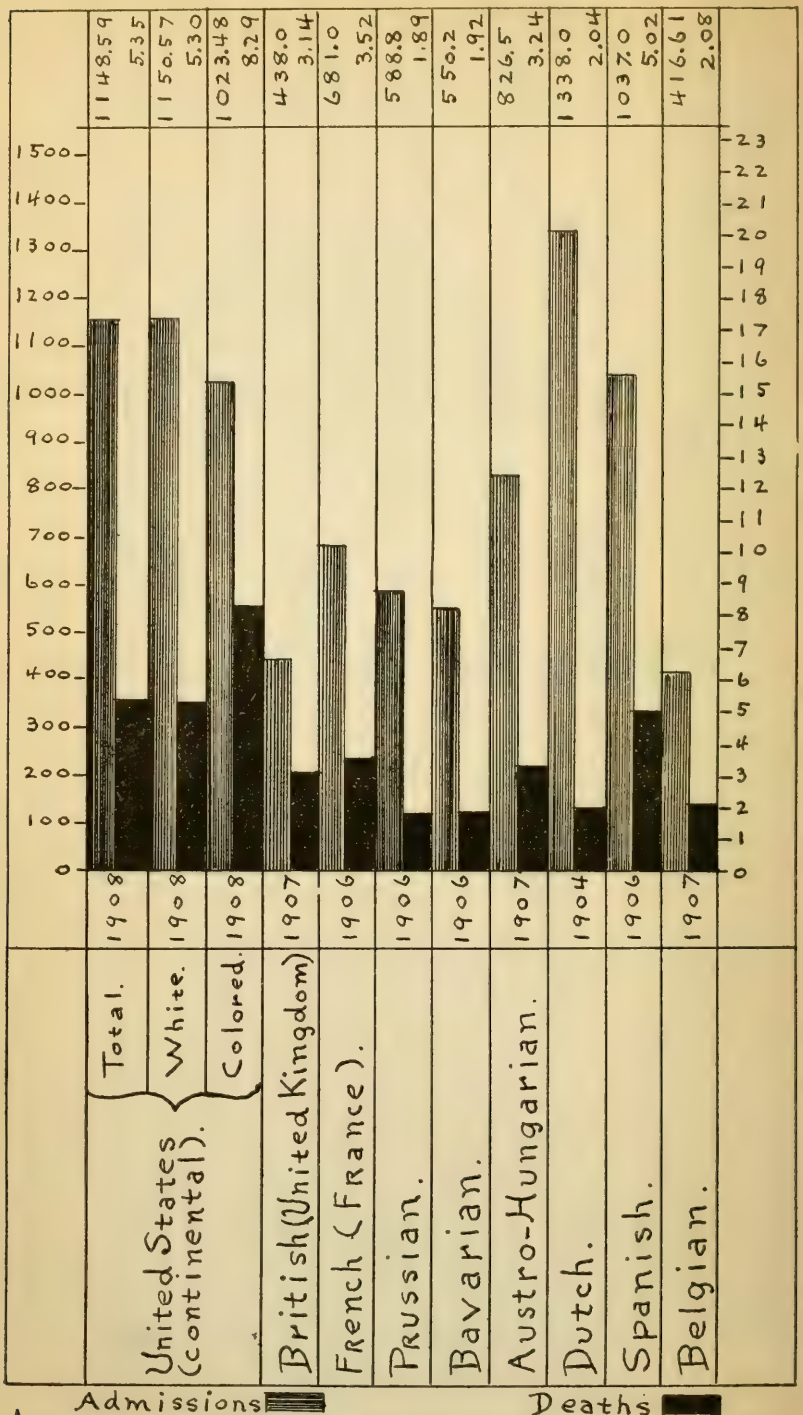


CHART K.—*Showing a comparison with foreign armies of the relative admission and death ratios per thousand of mean strength.*



Admissions for British (United Kingdom) and Belgian for Hospital only.

Admissions, scale on left. Deaths, scale on right.

It will be observed that on account of the delay in receiving the reports of foreign armies, none of the data relating to them refers to the year 1908, but in each year to the last report which has been received.

It will be observed in Chart J that the death rate for the American Army is greater than any other, but the total loss rate, which is the sum of the deaths and discharges, is less than any except the British and Belgian. The admission rate as shown in Chart K is higher than any other except the Dutch. This is probably due, as explained above, to the rule in our service of recording all cases of sickness, while in the foreign services the lighter cases are not recorded.

The death rate for our service is increased also by the custom of retaining on sick report for treatment many cases of tuberculosis and other diseases, which in foreign armies are discharged, thus giving them a lower death rate and a higher discharge rate.

SURGICAL OPERATIONS.

On page 162 will be found Table No. 66 of the principal surgical operations performed by medical officers upon officers and enlisted men of the army. In 3,467 operations there were only 21 failures and 31 deaths. The anesthetic used was ether in 965 cases, chloroform in 497, and spinal anesthesia in 9. There was 1 death from anesthesia.

One hundred and ninety-six operations were performed for appendicitis, with 6 deaths; 181 operations for hernia, with 1 death; 16 exploratory laparotomies, with 2 deaths; and 22 operations for abscess of the liver, with no deaths.

RECRUITING.

No recruit is now enlisted without a thorough physical examination by a medical officer of the army. The increased size of the army has caused a large increase in the number of recruits examined by medical officers during the year 1908, the total number being 54,885 as compared with 33,864 for the preceding year. The movement of recruits is shown in Table No. 5.

TABLE No. 5.

	White.		Colored.		Total.	
	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.
Examined by medical officers	52,740	1,000.00	2,145	1,000.00	54,885	1,000.00
Accepted by medical officers	44,566	845.01	1,915	892.77	46,481	846.88
By first enlistment	29,136	552.45	688	320.74	29,824	543.39
By all other enlistments	15,430	292.56	1,227	572.03	16,657	303.49
Rejected by medical officers	[a] 7,218	136.86	[a] 216	100.70	[a] 7,434	135.45
Declined	956	18.13	14	6.53	970	17.67

[a] Of this number 740 (725 white and 15 colored) were rejected for causes not physical.

This represents only the applicants who had previously passed the scrutiny of the recruiting officers, and who were therefore picked men. The number of examinations and of rejections by recruiting officers is not known to this office, but was of course much larger. The present system operates in a highly satisfactory manner and furnishes to the army recruits of excellent quality.

Table No. 6 shows the nativity of accepted recruits for the year.

TABLE NO. 6.

Country.	White.		Colored.		Total.	
	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.
United States	37,636	844.50	1,915	1,000.00	39,551	850.91
Germany	1,372	30.79			1,372	29.52
Ireland	1,202	26.97			1,202	25.86
Russia	1,045	23.45			1,045	22.48
Austria	669	15.01			669	14.39
England	538	12.07			538	11.57
Canada	422	9.47			422	9.08
Scandinavia	367	8.24			367	7.90
Hungary	295	6.62			295	6.35
Italy	209	4.69			209	4.50
Denmark	180	4.04			180	3.87
Scotland	123	2.76			123	2.65
Roumania	104	2.33			104	2.24
Switzerland	98	2.20			98	2.11
Holland	77	1.73			77	1.66
France	53	1.19			53	1.14
Turkey	41	.92			41	.88
Greece	32	.72			32	.69
Spain	16	.36			16	.34
Others	87	1.95			87	1.87
Total foreign	6,930	155.50			6,930	149.09
Grand total	44,566	1,000.00	1,915	1,000.00	46,481	1,000.00

The number of foreign born recruits is somewhat greater than last year, the ratio being 149.09 as compared with 134.10. The proportionate number from Ireland has increased while that from England has diminished as compared with last year, the ratios for Scotland and Canada remaining about the same. The most noticeable change as compared with the preceding report is the increasing number of Russians; the number accepted in 1908 being 1,045 as compared with 413 for 1907, the ratios being 22.48 and 13.76. While this nationality now stands third in the number of recruits furnished, it stands first in the number of men discharged from the service upon surgeon's certificates of disability. Twenty-seven soldiers of Russian nativity were discharged for disability, which equals in number those of German and Italian birth taken together so discharged.

The following tables have been carefully compiled and are of interest as they show the state of physical development of the material of which the army is composed.

The ages of all the recruits accepted, white and colored, and the proportion at each age per 1,000, are shown in this statement.

TABLE No. 7.

Age.	White.		Colored.		Total.	
	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.
18 years and under	2,765	62.04	29	15.14	2,794	60.11
19 years	1,818	40.79	22	11.49	1,840	39.59
20 years	1,208	27.11	25	13.05	1,233	26.53
21 years	9,622	215.90	202	105.48	9,824	211.36
22 years	4,341	97.41	117	61.10	4,458	95.91
23 years	2,940	65.97	107	55.87	3,047	65.55
24 years	3,313	74.34	138	72.06	3,451	74.24
25 years	2,720	61.04	100	52.22	2,820	60.67
26 years	2,106	47.26	103	53.79	2,209	47.52
27 years	2,064	46.31	119	62.14	2,183	46.97
28 years	1,912	42.90	123	64.23	2,035	43.78
29 years	1,424	31.95	127	66.32	1,551	33.37
30 years	1,232	27.64	113	59.01	1,345	28.94
31 years	1,155	25.92	116	60.58	1,271	27.34
32 years	969	21.74	86	44.91	1,055	22.70
33 years	799	17.93	58	30.29	857	18.44
34 years	624	14.00	56	29.25	680	14.63
35 years	502	11.26	37	19.32	539	11.60
36 years	393	8.82	33	17.23	426	9.17
37 years	364	8.17	34	17.75	398	8.56
38 years	374	8.39	25	13.05	399	8.58
39 years	285	6.40	24	12.53	309	6.65
40 years and over	1,636	36.71	121	63.19	1,757	37.80
Total	44,566	1,000.00	1,915	1,000.00	46,481	1,000.00

The series of tables which follow show separately for each race the heights of accepted recruits for the year and the proportion of each height per 1,000; also, in absolute and proportional numbers, the relation of height to age.

TABLE No. 8.—*Relation of height to age.*

ABSOLUTE NUMBERS—WHITE TROOPS.

Height.	Age.									Total.
	18 years and under.	19 years.	20 years.	21 years.	22 years.	23 years.	24 years.	25 years.	26 years and over.	
5 feet 1 inch and under				1	1	2	1		8	13
5 feet 2 inches	2	2	2	8	6	1	3	3	21	48
5 feet 3 inches	52	28	21	140	60	40	33	33	181	588
5 feet 4 inches	281	158	123	704	329	212	224	171	1,147	3,349
5 feet 5 inches	436	289	181	1,146	496	335	386	303	1,883	5,455
5 feet 6 inches	489	333	207	1,560	674	469	496	379	2,420	7,027
5 feet 7 inches	489	312	223	1,718	767	495	540	489	2,655	7,688
5 feet 8 inches	448	310	172	1,631	759	501	545	467	2,654	7,487
5 feet 9 inches	304	172	128	1,206	547	390	454	347	2,037	5,585
5 feet 10 inches	161	128	73	721	346	248	296	226	1,392	3,591
5 feet 11 inches	61	44	50	457	201	146	177	159	735	2,030
6 feet	28	29	21	203	94	61	98	91	447	1,072
6 feet 1 inch	10	8	5	81	43	24	44	37	170	422
6 feet 2 inches and over	4	5	2	46	18	16	16	15	89	211
Total	2,765	1,818	1,208	9,622	4,341	2,940	3,313	2,720	15,839	44,566

TABLE No. 8.—*Relation of height to age*—Continued.

PROPORTIONAL NUMBERS—WHITE TROOPS.

Height.	Age.									Total.
	18 years and under.	19 years.	20 years.	21 years.	22 years.	23 years.	24 years.	25 years.	26 years and over.	
5 feet 1 inch and under				0.10	0.23	0.68	0.30		0.51	0.29
5 feet 2 inches	0.72	1.10	1.66	.83	1.38	.34	.91	1.10	1.33	1.08
5 feet 3 inches	18.81	15.40	17.38	14.55	13.82	13.61	9.96	12.13	11.43	13.19
5 feet 4 inches	101.63	86.91	101.82	73.17	75.79	72.11	67.61	62.87	72.41	75.15
5 feet 5 inches	157.69	158.97	149.83	119.10	114.26	113.95	116.51	111.40	118.88	122.40
5 feet 6 inches	176.85	183.17	171.36	162.13	155.26	159.52	149.71	139.34	152.78	157.68
5 feet 7 inches	176.85	171.62	184.60	178.55	176.69	168.37	162.99	179.78	167.62	172.52
5 feet 8 inches	162.03	170.52	142.38	169.51	174.84	170.41	164.50	171.69	167.56	168.00
5 feet 9 inches	109.95	94.61	105.96	125.34	126.01	132.65	137.04	127.57	128.61	125.32
5 feet 10 inches	58.23	70.41	60.43	74.93	79.71	84.35	89.35	83.09	87.88	80.58
5 feet 11 inches	22.06	24.20	41.39	47.51	46.30	49.66	53.43	58.45	46.40	45.55
6 feet	10.13	15.95	17.38	21.10	21.65	20.75	29.58	33.45	28.22	24.05
6 feet 1 inch	3.62	4.40	4.14	8.42	9.91	8.16	13.28	13.60	10.73	9.47
6 feet 2 inches and over	1.45	2.75	1.66	4.78	4.15	5.44	4.83	5.51	5.62	4.73
Total	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00

TABLE No. 9.—*Relation of height to age.*

ABSOLUTE NUMBERS—COLORED TROOPS.

Height.	Age.									Total.
	18 years and under.	19 years.	20 years.	21 years.	22 years.	23 years.	24 years.	25 years.	26 years and over.	
5 feet 1 inch and under									1	1
5 feet 2 inches				2					2	4
5 feet 3 inches	1			1	4	1	1		15	23
5 feet 4 inches	2	2	1	18	8	10	11	5	78	135
5 feet 5 inches	5	3	3	41	12	14	17	17	135	247
5 feet 6 inches	7	2	5	29	27	17	17	19	190	313
5 feet 7 inches	5	7	7	30	16	17	31	17	216	346
5 feet 8 inches	3	2	5	31	22	9	27	18	195	312
5 feet 9 inches	4	3	2	30	16	22	18	12	137	244
5 feet 10 inches		3	1	11	4	8	9	9	102	147
5 feet 11 inches	1			2	5	5	5	2	57	77
6 feet				6	2	3	2	1	33	47
6 feet 1 inch	1				1	1			10	13
6 feet 2 inches and over			1	1					4	6
Total	29	22	25	202	117	107	138	100	1,175	1,915

PROPORTIONAL NUMBERS—COLORED TROOPS.

5 feet 1 inch and under									0.85	0.52
5 feet 2 inches				9.90					1.70	2.09
5 feet 3 inches	34.48			4.95	34.19	9.35	7.25		12.77	12.01
5 feet 4 inches	68.97	90.91	40.00	89.11	68.38	93.46	79.71	50.00	66.38	70.50
5 feet 5 inches	172.41	136.36	120.00	202.97	102.56	130.84	123.19	170.00	114.89	128.98
5 feet 6 inches	241.38	90.91	200.00	143.56	230.77	158.88	123.19	190.00	161.70	163.45
5 feet 7 inches	172.41	318.18	280.00	148.51	136.75	158.88	224.64	170.00	183.83	180.68
5 feet 8 inches	103.45	90.91	200.00	153.47	188.03	84.11	195.65	180.00	165.96	162.92
5 feet 9 inches	137.93	136.36	80.00	148.51	136.75	205.61	130.43	120.00	116.60	127.42
5 feet 10 inches		136.36	40.00	54.46	34.19	74.77	65.22	90.00	86.80	76.77
5 feet 11 inches	34.48			9.90	42.73	46.73	36.23	20.00	48.51	40.21
6 feet				29.70	17.09	28.04	14.49	10.00	28.08	24.54
6 feet 1 inch	34.48				8.55	9.35			8.51	6.79
6 feet 2 inches and over			40.00	4.95					3.40	3.13
Total	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00

It will be noted that 45.77 per cent of the white recruits were 5 feet 8 inches or over, and 8.97 per cent were 5 feet 4 inches or under, compared with 46.73 and 8.32 per cent for the previous year. For colored troops, 44.18 per cent were 5 feet 8 inches or over, and 8.51 per cent 5 feet 4 inches or under, compared with 47.54 and 7.08 per cent for the preceding year.

The average height for white recruits was 5 feet 7.4 inches; for colored, 5 feet 7.3 inches.

The following tables show separately for each race the weights of accepted recruits and the proportion of each weight per 1,000; also the relation of weight to age in both absolute and proportional numbers:

TABLE NO. 10.—*Relation of weight to age.*

ABSOLUTE NUMBERS—WHITE TROOPS.

Weight.	Age.									Total.
	18 years and under.	19 years.	20 years.	21 years.	22 years.	23 years.	24 years.	25 years.	26 years and over.	
119 pounds and under	141	70	38	177	58	49	36	38	301	908
120 to 124 pounds	471	262	161	776	288	155	163	126	646	3,048
125 to 129 pounds	523	309	176	1,203	453	262	284	232	1,155	4,597
130 to 134 pounds	484	323	202	1,411	596	391	379	307	1,627	5,720
135 to 139 pounds	382	286	175	1,531	650	417	446	354	1,893	6,134
140 to 144 pounds	319	204	161	1,368	625	406	477	388	1,948	5,896
145 to 149 pounds	190	167	114	1,138	580	391	446	357	1,917	5,300
150 to 154 pounds	122	86	77	789	389	310	336	284	1,589	3,982
155 to 159 pounds	61	40	53	479	254	205	255	206	1,275	2,828
160 to 164 pounds	34	27	25	355	198	140	187	166	971	2,103
165 to 169 pounds	14	21	15	175	117	83	135	109	706	1,375
170 to 174 pounds	10	11	7	96	64	57	61	60	508	874
175 to 179 pounds	6	7	.....	59	26	35	52	39	401	625
180 pounds and over	8	5	4	65	43	39	56	54	902	1,176
Total	2,765	1,818	1,208	9,622	4,341	2,940	3,313	2,720	15,839	44,566

PROPORTIONAL NUMBERS—WHITE TROOPS.

119 pounds and under	50.99	38.50	31.46	18.40	13.36	16.67	10.87	13.97	19.03	20.37
120 to 124 pounds	170.34	144.11	133.28	80.65	66.34	52.72	49.20	46.32	40.79	68.39
125 to 129 pounds	189.15	169.97	145.70	125.03	104.35	89.12	85.72	85.29	72.92	103.15
130 to 134 pounds	175.05	177.67	167.22	146.65	137.30	132.99	114.40	112.87	102.72	128.35
135 to 139 pounds	138.16	157.32	144.87	159.12	149.74	141.84	134.62	130.15	119.51	137.64
140 to 144 pounds	115.37	112.21	133.28	142.18	143.98	138.09	143.98	142.64	122.99	132.30
145 to 149 pounds	68.72	91.86	94.37	118.27	133.61	132.99	134.62	131.25	121.03	118.92
150 to 154 pounds	44.12	47.30	63.74	82.00	89.61	105.44	101.42	104.41	100.32	89.35
155 to 159 pounds	22.06	22.00	43.87	49.78	58.51	69.73	76.97	75.74	80.50	63.46
160 to 164 pounds	12.30	14.85	20.70	36.90	45.61	47.62	56.44	61.03	61.30	47.19
165 to 169 pounds	5.06	11.55	12.42	18.19	26.95	28.23	40.75	40.07	44.57	30.85
170 to 174 pounds	3.62	6.05	5.79	9.98	14.74	19.39	18.41	22.06	32.07	19.61
175 to 179 pounds	2.17	3.85	.....	6.13	5.99	11.90	15.70	14.34	25.31	14.02
180 pounds and over	2.89	2.75	3.31	6.76	9.91	13.27	16.90	19.85	56.94	26.39
Total	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00

TABLE No. 11.—*Relation of weight to age.*

ABSOLUTE NUMBERS—COLORED TROOPS.

Weight.	Age. 18 years and under.	19 years.	20 years.	21 years.	22 years.	23 years.	24 years.	25 years.	26 years and over.	Total.
119 pounds and under			1	4		1	2		5	13
120 to 124 pounds	3	4		10	7	3		3	20	50
125 to 129 pounds		4	2	11	10	7	11	9	66	120
130 to 134 pounds	10	1	6	29	15	13	14	9	84	181
135 to 139 pounds	5	5	5	35	18	11	19	6	118	222
140 to 144 pounds	4	3	3	29	17	14	16	19	140	245
145 to 149 pounds	3	1	4	33	18	14	19	13	150	255
150 to 154 pounds		3	2	12	11	13	17	13	137	208
155 to 159 pounds	1			15	8	8	13	13	108	166
160 to 164 pounds	3	1		11	8	8	16	2	91	140
165 to 169 pounds				5	3	6	8	6	69	97
170 to 174 pounds			1	5	1	3		1	54	65
175 to 179 pounds				1		2	3	3	35	44
180 pounds and over			1	2	1	4		3	98	109
Total	29	22	25	202	117	107	138	100	1,175	1,915

PROPORTIONAL NUMBERS—COLORED TROOPS.

119 pounds and under			40.00	19.80		9.35	14.49		4.26	6.79
120 to 124 pounds	103.45	181.82		49.50	59.83	28.04		30.00	17.02	26.11
125 to 129 pounds		181.82	80.00	54.46	85.47	65.42	79.71	90.00	56.17	62.66
130 to 134 pounds	344.83	45.45	240.00	143.56	128.21	121.50	101.45	90.00	71.49	94.52
135 to 139 pounds	172.41	227.27	200.00	173.27	153.85	102.80	137.68	60.00	100.43	115.93
140 to 144 pounds	137.93	136.36	120.00	143.56	145.30	130.84	115.94	190.00	119.15	127.94
145 to 149 pounds	103.45	45.45	160.00	163.37	153.85	130.84	137.68	130.00	127.66	133.16
150 to 154 pounds		136.36	80.00	59.40	94.02	121.50	123.19	130.00	116.60	108.62
155 to 159 pounds	34.48			74.26	68.38	74.77	94.20	130.00	91.92	86.68
160 to 164 pounds	103.45	45.45		54.46	68.38	74.77	115.94	20.00	77.45	73.11
165 to 169 pounds				24.75	25.64	56.08	57.97	60.00	58.72	50.65
170 to 174 pounds			40.00	24.75	8.55	28.04		10.00	45.96	33.94
175 to 179 pounds				4.95		18.69	21.74	30.00	29.79	22.98
180 pounds and over			40.00	9.90	8.55	37.38		30.00	83.40	56.92
Total	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00

The average weight of white recruits was 142.9 pounds; of colored recruits 148.6 pounds.

Fifty-four and twenty-one one-hundredths per cent of the white troops weighed 140 pounds or over, while 2.04 per cent weighed less than 120 pounds, as compared with 55.74 and 2.61 per cent for the previous year. Sixty-nine and four-tenths per cent of the colored troops weighed 140 pounds or over, and only 0.68 per cent less than 120 pounds, compared with 71.84 and 0.27 for 1907. These tables show that the colored recruits were heavier than the white recruits of the same age.

The next tables show separately for each race the chest measurement of accepted recruits and the proportion of each measurement per 1,000; also the chest measurement in relation to age in both absolute and proportional numbers.

TABLE No. 12.—*Relation of chest measurement to age.*

ABSOLUTE NUMBERS—WHITE TROOPS.

Chest measurement.	Age.									Total.
	18 years and under.	19 years.	20 years.	21 years.	22 years.	23 years.	24 years.	25 years.	26 years and over.	
30 inches and under	293	138	71	392	131	77	70	71	278	1,521
31 inches	568	350	197	1,161	411	254	233	185	898	4,257
32 inches	805	509	349	2,419	992	619	647	492	2,354	9,186
33 inches	534	364	261	2,125	967	639	756	582	2,998	9,226
34 inches	329	264	184	1,704	824	597	644	544	3,105	8,195
35 inches	149	121	79	1,031	539	391	498	422	2,554	5,784
36 inches	61	50	44	495	308	213	274	240	1,707	3,392
37 inches	17	15	12	205	108	91	107	103	915	1,573
38 inches	8	6	6	71	48	41	56	54	487	777
39 inches and over	1	1	5	19	13	18	28	27	543	655
Total	2,765	1,818	1,208	9,622	4,341	2,940	3,313	2,720	15,839	44,566

PROPORTIONAL NUMBERS—WHITE TROOPS.

30 inches and under	105.97	75.91	58.77	40.74	30.18	26.19	21.13	26.10	17.55	34.13
31 inches	205.42	192.52	163.08	120.66	94.68	86.39	70.33	68.02	56.69	95.52
32 inches	291.14	279.98	288.91	251.40	228.52	210.54	195.29	180.88	148.62	206.12
33 inches	193.13	200.22	216.06	220.85	222.76	217.35	228.19	213.97	189.30	207.01
34 inches	118.99	145.23	152.32	177.10	189.82	203.06	194.38	200.00	196.03	183.88
35 inches	53.89	66.56	65.40	107.15	124.16	132.99	150.32	155.15	161.25	129.98
36 inches	22.06	27.50	36.43	51.44	70.95	72.44	82.70	88.24	107.77	76.11
37 inches	6.15	8.25	9.93	21.31	24.88	30.95	32.30	37.87	57.77	35.29
38 inches	2.89	3.30	4.97	7.38	11.06	13.95	16.90	19.85	30.75	17.43
39 inches and over	.36	.55	4.14	1.97	2.99	6.12	8.45	9.93	34.27	14.70
Total	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00

TABLE No. 13.—*Relation of chest measurement to age.*

ABSOLUTE NUMBERS—COLORED TROOPS.

Chest measurement.	Age.									Total.
	18 years and under.	19 years.	20 years.	21 years.	22 years.	23 years.	24 years.	25 years.	26 years and over	
30 inches and under	3	.....	4	8	6	.....	7	2	13	43
31 inches	6	7	4	25	11	8	7	8	48	124
32 inches	9	7	5	45	23	20	23	25	145	302
33 inches	7	4	4	50	25	17	33	17	189	346
34 inches	2	1	3	30	28	24	35	13	223	359
35 inches	2	1	2	21	15	19	17	18	205	300
36 inches	.....	2	1	17	6	7	11	12	166	222
37 inches	.....	.....	.....	3	1	8	4	2	89	107
38 inches	.....	.....	2	2	1	2	1	2	48	58
39 inches and over	.....	.....	.....	1	1	2	.....	1	49	54
Total	29	22	25	202	117	107	138	100	1,175	1,915

PROPORTIONAL NUMBERS—COLORED TROOPS.

30 inches and under	103.45	.....	160.00	39.60	51.28	.....	50.72	20.00	11.06	22.45
31 inches	206.90	318.18	160.00	123.76	94.02	74.77	50.72	80.00	40.85	64.75
32 inches	310.34	318.20	200.00	222.77	196.58	186.92	166.67	250.00	123.40	157.70
33 inches	241.38	181.82	160.00	247.52	213.68	158.88	239.13	170.00	160.85	180.68
34 inches	68.97	45.45	120.00	148.51	239.32	224.30	253.62	130.00	189.80	187.47
35 inches	68.97	45.45	80.00	103.96	128.21	177.57	123.19	180.00	174.47	156.66
36 inches	.....	90.91	40.00	84.16	51.28	65.42	79.71	120.00	141.28	115.93
37 inches	.....	.....	.....	14.85	8.55	74.77	28.99	20.00	75.77	55.88
38 inches	.....	.....	80.00	9.90	8.55	18.69	7.25	20.00	40.85	30.29
39 inches and over	.....	.....	.....	4.95	8.55	18.69	.....	10.00	41.70	28.20
Total	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00

The chest measurement of 45.74 per cent of white recruits was 34 inches and over, and 3.41 per cent were 30 inches and under, compared with 41.25 and 4.23 per cent, respectively, for the previous year. The chest measurements for colored recruits show 57.44 per cent 34 inches or over, and 2.24 per cent 30 inches and under, compared with 53.54 and 2.36 per cent, respectively, for 1907, the colored candidates again showing to advantage.

The following table shows the causes of rejection among white and colored candidates examined for enlistment during the year 1907, with ratios per 1,000 rejected:

TABLE NO. 14.—*Causes of rejection of white and colored candidates examined for enlistment by medical officers of the army, 1908.*

Causes of rejection.	Total.		White.		Colored.	
	Number.	Ratio per 1,000 of all rejections for causes, physical and mental.	Number.	Ratio per 1,000 of all rejections for causes, physical and mental.	Number.	Ratio per 1,000 of all rejections for causes, physical and mental.
Diseases of the eye, including defects of vision	723	108.01	702	108.12	21	104.48
Venereal diseases	714	106.66	670	103.19	44	218.91
Diseases of the ear, including defects of hearing	617	92.17	608	93.64	9	44.78
Heart disease	589	87.99	570	87.79	19	94.53
Flat feet	388	57.96	375	57.75	13	64.68
Alcoholism	378	56.47	369	56.83	9	44.78
Under weight	296	44.22	289	44.51	7	34.83
Defective teeth	295	44.07	292	44.97	3	14.93
Hernia	284	42.43	277	42.66	7	34.83
Chest development insufficient	259	38.69	257	39.58	2	9.95
Defects of development, except as shown in detail	219	32.72	214	32.96	5	24.88
Diseases of the respiratory system	201	30.03	194	29.88	7	34.83
Diseases of the skin	198	29.58	191	29.42	7	34.83
Curvature of the spine	197	29.43	189	29.11	8	39.80
Diseases of the genito-urinary system, nonvenereal	192	28.68	184	28.34	8	39.80
Varicose veins, except as shown in detail	176	26.29	169	26.03	7	34.83
Injuries	174	25.99	174	26.80	.....	.....
Diseases of the organs of locomotion, except spinal curvature	157	23.45	152	23.41	5	24.88
Tuberculosis	132	19.72	127	19.56	5	24.88
Varicocele	87	13.00	86	13.25	1	4.98
Hemorrhoids	74	11.05	71	10.93	3	14.93
Diseases of the digestive system, except as shown in detail	69	10.31	68	10.47	1	4.98
Diseases of the nervous system, except as shown in detail	63	9.41	59	9.09	4	19.90
Weakness of mind	47	7.02	45	6.93	2	9.95
Overweight and obesity	44	6.57	43	6.62	1	4.98
General diseases, except as shown in detail	42	6.27	40	6.16	2	9.95
Underheight	35	5.23	34	5.24	1	4.98
Diseases of the circulatory system, except as shown in detail	29	4.33	29	4.47	.....	.....
Physical debility	12	1.79	12	1.85	.....	.....
Over height	3	.45	3	.46	.....	.....
Rejected for causes, physical and mental	6,694	1,000.00	6,493	1,000.00	201	1,000.00
Rejected for causes not physical or mental	740	.....	725	.....	15	.....
Total	7,434	.....	7,218	.....	216	.....

Diseases of the eye, including defects of vision, caused the largest proportion of rejections, as was the case last year, although the ratio for this cause was considerably less. Venereal diseases were again second, and diseases of the ear, including deafness, third. The ratio per 1,000 of rejections for venereal disease for the colored race were more than double that for the white, while for diseases of the ear,

including deafness, their ratio was less than half that of the whites. Table No. 15 shows the principal occupations of 29,824 recruits enlisted during the year.

TABLE No. 15.—*Occupation of soldiers, first enlisted, 1908.*

Occupation.	Number in each class.			Occupation.	Number in each class.		
	Total.	White.	Colored.		Total.	White.	Colored.
Laborers	7,299	6,970	329	Nurses	67	66	1
Farmers	3,860	3,826	34	Teachers	67	66	1
Drivers and stablemen	2,189	2,139	50	Leather workers	66	64	2
Clerks	1,709	1,700	9	Jewelers	63	63	.....
Carpenters	1,156	1,151	5	Chauffeurs	46	43	3
Firemen	1,006	996	10	Plasterers	45	43	2
Machinists	960	958	2	Cigar makers	41	41	.....
Miners	850	830	20	Civil engineers	38	38	.....
Railroad hands	781	766	15	Hatters	38	38	.....
Painters	767	755	12	Stenographers	37	37	.....
Cooks	616	558	58	Confectioners	36	35	1
Plumbers	554	553	1	Canvassers	34	33	1
Electricians	477	475	2	Draftsmen	33	33	.....
Musicians	431	425	6	Bookbinders	31	31	.....
Blacksmiths	373	367	6	Packers	30	30	.....
Metal workers	363	363	.....	Coopers	29	28	1
Barbers	338	325	13	Merchants	29	28	1
Tailors	309	304	5	Roofers	29	27	2
Waiters	307	274	33	Brass workers	24	24	.....
Printers	304	301	3	Oil workers	24	24	.....
Butchers	281	277	4	Potters	24	24	.....
Engineers	268	267	1	Inspectors	22	22	.....
Bakers	258	256	2	Box makers	22	22	.....
Molders	251	246	5	Gardeners	21	21	.....
Telegraphers	250	249	1	Photographers	20	20	.....
Salesmen	247	246	1	Laundrymen	19	18	1
Sailors	218	217	1	Watchmen	19	18	1
Brick and stone masons	204	202	2	Dairymen	18	18	.....
Shoemakers	191	190	1	Engravers	17	17	.....
Bookkeepers	163	162	1	Chair makers	16	16	.....
Boiler makers	154	154	.....	Broom makers	16	16	.....
Tinners	148	148	.....	Tanners	13	13	.....
Mill workers	143	142	1	Cement workers	14	13	1
Weavers	135	135	.....	Trunk makers	11	11	.....
Students	125	123	2	Lawyers	11	11	.....
Lumbermen	110	110	.....	Journalists	10	10	.....
Porters	119	89	30	Locksmiths	10	10	.....
Paper workers	89	89	.....	Florists	10	10	.....
Glass workers	83	83	.....	Miscellaneous others	413	409	4
Mechanics	81	81	.....				
Druggists	75	75	.....	Total	29,824	29,136	688
Conductors	69	68	1				

DISCHARGES FOR DISABILITY.

Soldiers belonging to organizations stationed outside the territorial limits of the United States are customarily sent to San Francisco for discharge. The discharge rate for all causes has shown a steady and gratifying diminution since 1906, when the system of recruiting was so modified as to require every recruit to be examined by an officer of the Medical Corps. The recent establishment of additional recruit depots at Fort Logan and Benicia Barracks will permit of holding recruits somewhat longer under observation and may thus be expected to still further eliminate applicants having concealed disqualifications. In this way the discharges for causes existing prior to enlistment may be expected to be still further reduced in the future.

The total disability discharge rate for 1908 is 18.48, as compared with 20.15 for 1907 and 26.00 for 1906. The principal causes for discharge during the year were tuberculosis, ratio 2.50; venereal diseases, ratio 2.33; and insanity, ratio 1.05. These diseases hold the

same relative positions as last year, but the ratios are considerably lower.

EXAMINATION AND OBSERVATION OF RECRUITS.

A very thorough investigation of the system of examination and observation of recruits in vogue at the recruit depots of Fort Slocum, Columbus Barracks, and Jefferson Barracks was made during the year in consequence of an expression of opinion by the chief surgeon, army of Cuban pacification, that there were too many discharges from that army for disability which existed prior to enlistment, which it seemed a careful examination should have disclosed. Twenty-two discharges were reported by him as made between June 30 and September 30, 1908, for causes existing prior to enlistment. The investigation, which was painstaking and thorough, showed that in some cases the disability had developed since enlistment and in others—such as cases of epilepsy, chronic alcoholism, latent syphilis, and defective mental development—no manifestations of the disqualification appeared during the stay of the recruit at the depot, which was frequently, on account of the necessities of the service, much briefer than was desirable. The Surgeon-General, in reviewing the voluminous report of this investigation, expressed himself as follows:

> In conclusion, it is believed that the medical officers on duty at the recruit depots are doing work of a very high order and are accomplishing all that can be expected of them in the detection and elimination of those unfit for military service. This opinion is sustained by the marked decrease in the number of discharges for disability in the army since the new system of recruiting has gone into operation, and also by the greatly diminished number of complaints received at this office as to the inferior character of recruits.

UNITED STATES (CONTINENTAL) EXCLUSIVE OF ALASKA.

The average mean strength of the troops serving in the United States was 46,316, of which 45,592 were white and 724 were colored. Deaths and discharges of soldiers which occurred in the United States, they having been invalided home from their commands in foreign service, have been charged to the country where such commands are stationed. The admission, discharge, death, and constantly noneffective rates are all lower than those of last year or 1906.

The remarkable diminution of the discharge rate since it has been required that all recruits shall be passed upon by a medical officer is very gratifying. This rate was for 1906, 33.88; for 1907, 25.36; for 1908, 21.35; being a diminution of 37 per cent in two years. The venereal diseases were as usual in the lead, both in the admission and constantly noneffective rate. For admissions, next in importance were diarrhea and enteritis, 46.49; influenza, 40.98; and bronchitis, 36.21. In order of their constantly noneffective rates, which constitute the real test of their effect in military efficiency, the order is tuberculosis, 3.02; measles, 0.88; bronchitis, 0.74. The most important cause for discharge was tuberculosis, with venereal diseases second.

Pneumonia was the principal cause of death, with tuberculosis second and typhoid fever third, while for the preceding year cerebrospinal fever led, with tuberculosis second and pneumonia third. The total number of deaths was 257, of which 108 were from external causes, 25 of them being suicides and 72 accidental.

CHART L.—*Showing ratios per thousand of mean strength for discharges for disability, all causes, by years, since 1899, for the United States proper.*

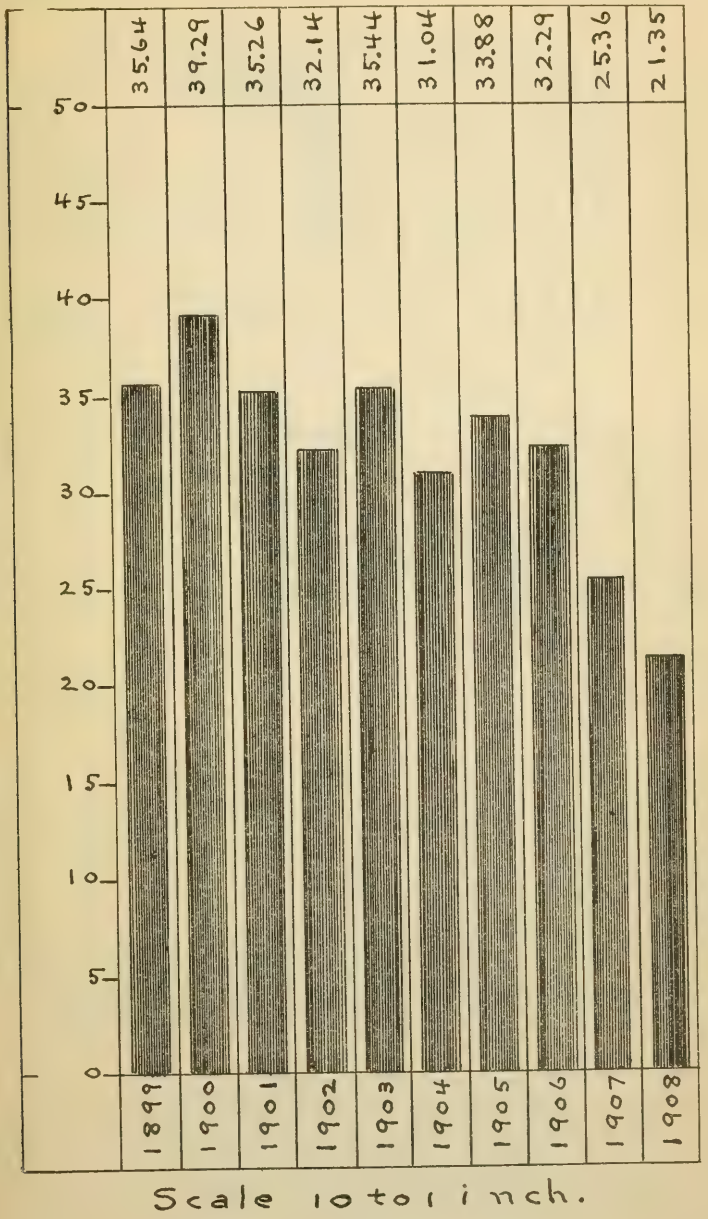


CHART M.—*Showing the relative admission, death, discharge, and noneffective ratios per thousand of mean strength for the five diseases causing the highest rates in the United States proper.*

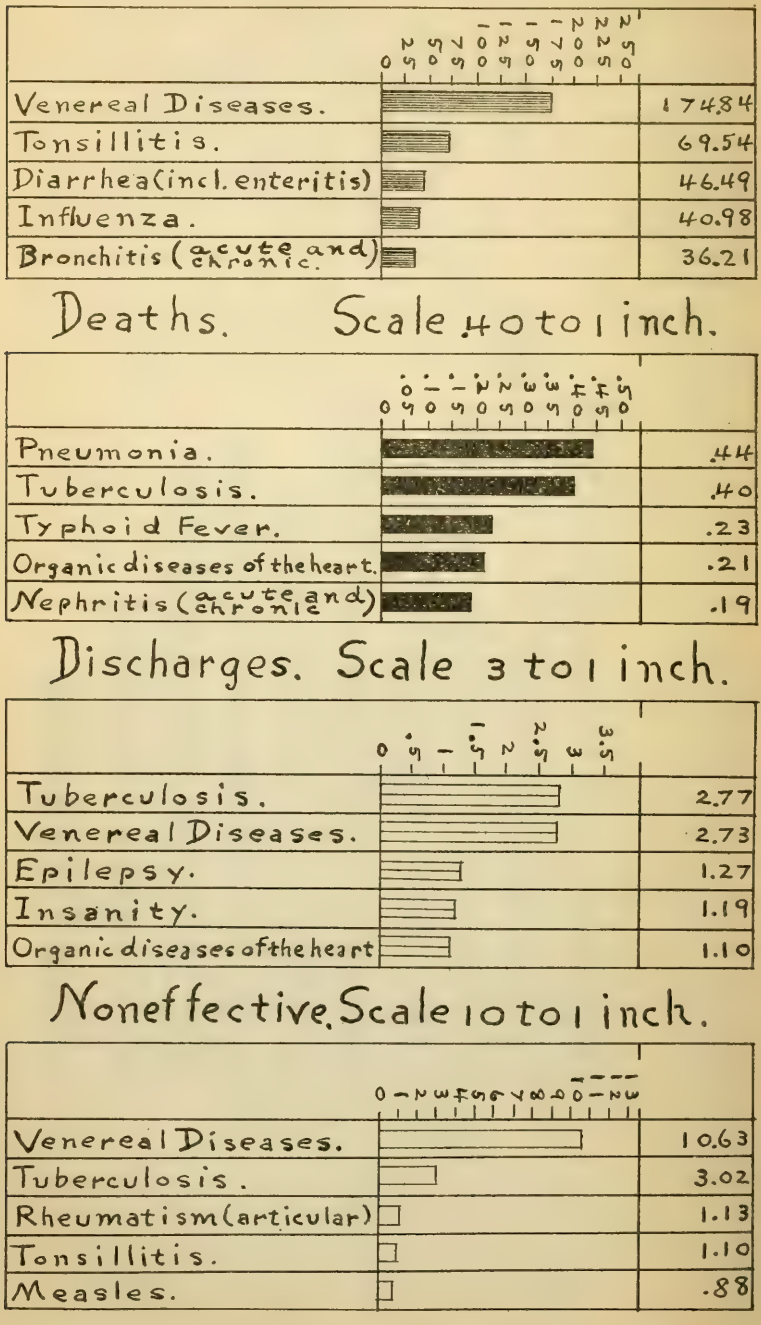

Admissions. Scale 200 to 1 inch.
0 25 50 75 100 125 150 175 200 225 250
Venereal Diseases. 174.84
Tonsillitis. 69.54
Diarrhea (incl. enteritis) 46.49
Influenza. 40.98
Bronchitis (acute and chronic) 36.21
Deaths. Scale 40 to 1 inch.
0 5 10 15 20 25 30 35 40 45 50
Pneumonia. .44
Tuberculosis. .40
Typhoid Fever. .23
Organic diseases of the heart. .21
Nephritis (acute and chronic) .19
Discharges. Scale 3 to 1 inch.
0 .5 1 1.5 2 2.5 3 3.5
Tuberculosis. 2.77
Venereal Diseases. 2.73
Epilepsy. 1.27
Insanity. 1.19
Organic diseases of the heart 1.10
Noneffective. Scale 10 to 1 inch.
0 1 2 3 4 5 6 7 8 9 10 11 12 13
Venereal Diseases. 10.63
Tuberculosis. 3.02
Rheumatism (articular) 1.13
Tonsillitis. 1.10
Measles. .88

TABLE NO. 16.—*Deaths among troops serving in the United States (continental), excluding Alaska, in 1908.*

Causes.	Number.	Ratio per 1,000 of— Mean strength.	Total deaths.
DISEASES.			
Pneumonia	21	0.44	140.94
Tuberculosis (pulmonary, 16; of other organs, 3)	19	.40	127.52
Typhoid fever	11	.23	73.83
Diseases of the liver (abscess, 5; cirrhosis, 4; acute yellow atrophy of, 1; chronic cholecystitis, 1)	11	.23	73.83
Organic disease of the heart	10	.21	67.11
Nephritis (chronic, 6; acute, 3)	9	.19	60.40
Measles	8	.17	53.69
Alcoholism (acute, 4; chronic, 3; delirium tremens, 1)	8	.17	53.69
Cerebro-spinal meningitis	7	.15	46.98
Appendicitis	5	.10	33.56
Diphtheria	4	.08	26.85
Cancer	3	.03	20.13
Syphilis (secondary, 1; tertiary, 1)	2	.04	13.42
Apoplexy	2	.04	13.42
Broncho-pneumonia	2	.04	13.42
Sprue	2	.04	13.42
Diseases of the ear (otitis media, 1; mastoiditis, 1)	2	.04	13.42
Diarrhea and enteritis (chronic diarrhea, 1; chronic enteritis, 1)	2	.04	13.42
Diseases of the stomach (gastric ulcer, 1; chronic gastro-intestinal dyspepsia, 1)	2	.04	13.42
Influenza	1	.02	6.71
Dysentery (bacillary)	1	.02	6.71
Septicemia	1	.02	6.71
General lymphadenoma	1	.02	6.71
Acute articular rheumatism	1	.02	6.71
Diabetes	1	.02	6.71
Addison's disease	1	.02	6.71
Leukemia	1	.02	6.71
Chronic narcotic poisoning	1	.02	6.71
Cerebral meningitis	1	.02	6.71
Multiple neuritis	1	.02	6.71
Pericarditis	1	.02	6.71
Angina pectoris	1	.02	6.71
Aneurism	1	.02	6.71
Bronchiectasis	1	.02	6.71
Pleurisy	1	.02	6.71
Tonsillitis	1	.02	6.71
Strangulated hernia	1	.02	6.71
Pemphigus contagiosus	1	.02	6.71
Total	149	3.10	1,000.00
EXTERNAL CAUSES.			
Suicidal:			
By gunshot wounds (revolver, 9; rifle, 3)	12		
By poisoning, acute (carbolic acid, 5; opium, 2; cocaine, 1; phenol, 1)	9		
By hanging	3		
By incised wound (cutting throat with razor)	1		
Total suicides	25	.52	231.48
Homicidal:			
By gunshot wounds (by sentry while attempting escape, rifle, 2; in brawls, rifle 1, revolver 1; by comrade, revolver, 1)	5		
By blunt instruments (fracture of skull; in a brawl, hit with a chair, 1; weapon not stated, 1; found dead, apparently murdered, weapon not stated, 3)	5		
By incised wound (found dead with throat cut)	1		
Total homicides	11	.23	101.85
Accidental:			
By drowning (circumstances not given, 10; overturning of rowboat, 8; fall from steamers, 3; while swimming horses, 3; while bathing, 3; collapse of bridge, 2; thrown in river by cable wire, 1)	30		
By gunshot wounds (self-inflicted, circumstances not given; shotgun, 2; rifle, 1; while cleaning rifles, 2; while attempting to draw shotgun over logs toward himself, 1; shot by comrades, revolvers 3, rifle 1, shotgun 1; while marker at target range, rifle, 2; shot fired at another person, revolver, 1; by constable, while soldier was watching a fight, revolver, 1)	15		
By poisoning, acute (wood alcohol, 7; opium taken by mistake, 1; ptomaine poisoning from eating canned tomatoes, 1)	9		

TABLE No. 16.—*Deaths among troops serving in the United States (continental), excluding Alaska, in 1908*—Continued.

Causes.	Number.	Ratio per 1,000 of— Mean strength.	Total deaths.
EXTERNAL CAUSES—continued.			
Accidental—Continued.			
By railroad cars (electric cars—struck by car, fracture of spine, 1; concussion of brain, 1; run over by car, decapitated, 1; crushing, 1. Steam cars: Struck by train, fracture of skull, 2; run over by train, crushing, 1)	7	.....	.....
By falling (from automobiles, fracture of skull, 2; from horse, fracture of spine, 1; from balcony, fracture of skull, 1; from caisson, while drilling, laceration of middle meningeal artery, 1)	5	.....	.....
By freezing (exposure while drunk)	2	.....	.....
Asphyxiation by gas	1	.....	.....
Suffocation by being shut up in burning house	1	.....	.....
While playing football, fracture of spine	1	.....	.....
Caught under water-pipe carrier while driving sprinkle cart, fracture of spine	1	.....	.....
Total accidental	72	1.50	666.67
Total from external causes	108	2.25	1,000.00
Total from diseases	149	3.10	1,000.00
Total from disease and injury	257	5.35	1,000.00

PREVALENCE OF SPECIAL DISEASES.

TYPHOID FEVER.

The number of cases of typhoid fever which occurred during the year within the geographical limits of the United States was 136. Its distribution at the different posts is shown as follows:

TABLE No. 17.—*Typhoid fever at military stations, 1908.*

Station.	Admitted.	Days treated.	Constantly sick.	Died.
Fort Des Moines, Iowa	10	697	1.90	1
Fort Wingate, N. Mex	8	378	1.03	1
Fort Monroe, Va	6	535	1.46	.....
Columbus Barracks, Ohio	6	309	.84	.....
Fort Riley, Kans	5	798	2.18	.....
Fort Robinson, Nebr	5	245	.67	.....
West Point, N. Y	4	324	.89	.....
Fort Myer, Va	4	202	.55	.....
Maneuver camp, Fort Riley, Kans	4	9	.02	.....
Fort Wright, Wash	3	303	.83	1
Key West Barracks, Fla	3	108	.30	1
Fort Leavenworth, Kans	3	355	.97	.....
Fort Caswell, N. C	3	230	.63	.....
Fort Mott, N. J	3	219	.60	.....
Jefferson Barracks, Mo	3	164	.45	.....
Jackson Barracks, La	3	159	.43	.....
Maneuver camp, Leon Springs, Tex	3	18	.05	.....
Maneuver camp, David S. Stanley, Wash	3	12	.03	.....
Maneuver camp, Chickamauga Park, Ga	3	8	.02	.....
Fort Barrancas, Fla	2	141	.39	1
General hospital, San Francisco, Cal	2	352	.96	1
Fort Sam Houston, Tex	2	337	.92	1
Fort Williams, Me	2	79	.22	1
Fort Lawton, Wash	2	248	.68	.....
Fort Logan, Colo	2	131	.36	.....
Fort Constitution, N. H	2	127	.35	.....
Fort Thomas, Ky	2	125	.34	.....
Fort Sill, Okla	2	108	.30	.....
Plattsburg Barracks, N. Y	2	99	.27	.....
Army and Navy General Hospital, Hot Springs, Ark	2	97	.26	.....
Fort Warren, Mass	2	94	.26	.....

TABLE NO. 17.—*Typhoid fever at military stations, 1908*—Continued.

Station.	Admitted.	Days treated.	Constantly sick.	Died.
Fort William Henry Harrison, Mont	2	55	0.15	.....
Maneuver camp near Fort Benjamin Harrison, Ind	2	11	.03	.....
Post Presidio of San Francisco, Cal	2	2	.01	.....
Fort D. A. Russell, Wyo	1	46	.13	1
Fort Clark, Tex	1	15	.04	1
Fort Benjamin Harrison, Ind	1	171	.47	.....
Fort Wayne, Mich	1	111	.30	.....
Fort Jay, N. Y	1	81	.22	.....
Madison Barracks, N. Y	1	72	.20	.....
Fort Sheridan, Ill	1	72	.20	.....
Fort Moultrie, S. C	1	68	.19	.....
Fort Huachuca, Ariz	1	66	.18	.....
Fort Slocum, N. Y	1	60	.16	.....
Fort McHenry, Md	1	59	.16	.....
Fort Wadsworth, N. Y	1	50	.14	.....
Watervliet Arsenal, N. Y	1	48	.13	.....
Fort Schuyler, N. Y	1	45	.12	.....
Fort Fremont, S. C	1	40	.11	.....
Fort Hancock, N. J	1	24	.07	.....
Fort Dade, Fla	1	19	.05	.....
Fort Snelling, Minn	1	17	.05	.....
Fort Wright, N. Y	1	15	.04	.....
General hospital, Washington, D. C	1	5	.01	.....
Maneuver camp, Emmet Crawford, Wyo	1	4	.01	.....
Maneuver camp, Pine Plains, N. Y	1	1	.003	.....
Fort Mason, Cal	1	1	.003	.....
Temporary camps in field, Department of Colorado	1	1	.003	.....
Fort Crook, Nebr	.....	93	.25	.....
Fort Ontario, N. Y	.....	79	.22	.....
Fort Duchesne, Utah	.....	63	.17	.....
Fort Oglethorpe, Ga	.....	61	.17	1
Fort Niagara, N. Y	.....	30	.08	.....
Fort Ethan Allen, Vt	.....	1	.003	.....
Total	136	8,497	23.22	11

The admission and death rates for this disease were 2.94 and 0.23, respectively, the former being the lowest for any year of record in this office. The case mortality was 8 per cent, this and the death rate being higher than for last year, when they were 5.6 and 0.19, respectively. The ratio of incidence for white troops was 2.96 and for colored troops 1.38.

The following comparative table shows the most important variations in the occurrence of this disease for the present year as compared with 1907:

TABLE NO. 18.—*Typhoid fever.*

Post.	1907.	1908.
Fort Sam Houston, Tex	16	2
Fort Leavenworth, Kans	12	3
Fort Wingate, N. Mex	0	8
Fort Des Moines, Iowa	3	10
Fort Thomas, Ky	7	2
Fort Walla Walla, Wash	5	0
Fort Slocum, N. Y	6	1
Columbus Barracks, Ohio	10	6
Fort Oglethorpe, Ga	4	0
Fort Robinson, Nebr	2	5
Fort Riley, Kans	2	5
Fort Monroe, Va	4	6

It will be observed in this table that none of the posts which showed any considerable occurrence of this disease in 1907 had many cases during the last year except Columbus Barracks. This post being a

recruiting depot, receives a large number of transients from the neighboring States, and so it may be expected to furnish a considerable number of cases from sources of infection outside the post.

The greatest number of cases during the past year occurred at Fort Des Moines, Iowa. The cases were not confined to any one organization, and only four occurred in any one month. The source of infection was not discovered in any case, but the surgeon was inclined to attribute it to the use of beverages cooled with natural ice.

Fort Wingate, N. Mex., had the next greatest number, with eight. Of these, seven occurred in the month of October soon after the arrival of the men at this station; the source of infection, therefore, seems to have been outside of the post. The infection at Fort Riley, Fort Robinson, West Point, and Fort Myer is ascribed to sources outside the posts, while for that at Fort Monroe no explanation has been received.

During the summer of 1908 Maj. F. F. Russell, Medical Corps, was sent to Europe to make a study of the methods in use in England for the prevention and stamping out of typhoid fever epidemics, both in the army and among the civil population. His investigations were conducted with great industry and ability, and his report is a very valuable treatise on the epidemiology of this disease up to date, and concludes with a programme for a preventive campaign against this disease in the military service.

This report and his recommendations were then submitted to a board of eight medical officers, of which the Surgeon-General was president and Major Russell recorder. The other six were distinguished members of the Army Medical Reserve Corps on the inactive list, and the assembling of this board is notable as the first occasion upon which the services of members of the Reserve Corps of great distinction in their profession have been employed in behalf of the army. These members were:

Dr. Victor C. Vaughan, dean of the department of medicine and surgery, University of Michigan.
Dr. William T. Councilman, professor of pathology, Harvard University.
Dr. John H. Musser, professor of clinical medicine, University of Pennsylvania.
Dr. Alexander Lambert, professor of clinical medicine, Cornell University, New York.
Dr. Simon Flexner, director of laboratories, Rockefeller Institute for Medical Research.
Dr. William S. Thayer, professor of clinical medicine, Johns Hopkins University, Maryland.

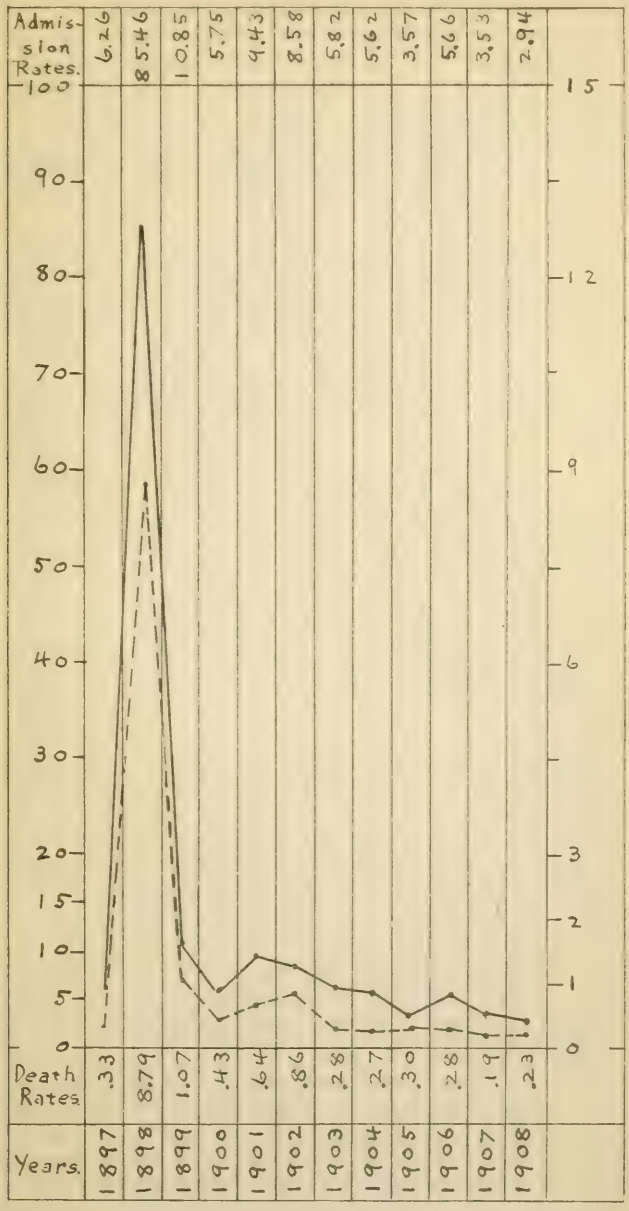
The board proceeded to review the history of vaccination as a method of protecting troops against typhoid fever. The experience of both the English and the German armies was considered.

The theory on which the practice is based as well as many details involved in carrying out the procedure were considered, as was also the probable effect on the medical profession and the public at large in the United States.

As a result of several hours discussion the board adopted, without any dissenting voices, the following conclusions:

I. The board is convinced that the practice of antityphoid vaccination is both useful and harmless and that it offers a practicable means of diminishing the amount of typhoid fever in the army both in times of peace and war.

CHART N. *–Showing the admission and death ratios per thousand of mean strength for typhoid fever, by years, since 1897, for the United States proper.*



Admissions_____Scale on the left
20 to 1 inch.

Deaths_____Scale on the right
3 to 1 inch.

II. It finds that the experience to date with antityphoid vaccination justifies it in recommending the introduction of the practice in the Regular and Volunteer armies in time of war.

III. It recommends the immediate introduction of the practice of voluntary vaccination against typhoid in the Hospital Corps, the Army Nurse Corps, and in any expedition of troops from the Regular Army which is ordered to take the field for active operations; and further, that an opportunity be given to volunteers from the army as a whole to be protected by vaccination against typhoid.

There being no further business before it, the board adjourned sine die.

This office immediately proceeded to carry out the recommendations of the board by calling the attention of the chief surgeons to the above conclusions which were published in G. O. No. 10, W. D., 1909, and directed them to inform all medical officers that vaccin could be procured from the laboratory of this office, and that it was desirable to begin inoculations upon members of the Hospital Corps and Army Nurse Corps and such other persons connected with the army as volunteered, although the intention at this time is not to make an energetic campaign outside the Medical Department. Their attention was called to the fact that Leishman, in a recent report published in the Journal of the Royal Army Medical Corps, gave the following results of typhoid vaccinations: 5,473 men were vaccinated, of whom 21 had typhoid and 2 died. Among these 21, only 2 had had a second dose of the new vaccin, and these recovered. Three of the 4 were noted as extremely mild, and the diagnosis of typhoid in one of them was doubtful. Among the same organizations 6,610 were not vaccinated, and of these 187 developed typhoid fever and 26 died.

As soon as possible after this board had reached its favorable decision preparations were made at the Army Medical School to manufacture the vaccine in large quantities. A special room in the Army Medical Museum was fitted up as a vaccin laboratory. It was furnished with a complete equipment of entirely new apparatus, specially planned for this particular purpose. The room is in a different part of the building from the general quarters of the Army Medical School and is so arranged that an interchange of material and glassware is impossible between the two divisions. Everything essential to the making of the prophylactic is found in this laboratory, and no work of any other kind is done there. These provisions make it possible to produce a vaccin the purity of which is beyond suspicion. The capacity of the laboratory is now about 3,000 doses daily, but with a slight increase in the number of assistants this quantity can be doubled. In February the laboratory was completed and a considerable quantity of vaccin was ready for use by the end of that month. The immunization of volunteers in the city of Washington was begun by the 1st of March, and as the immediate results were completely satisfactory the vaccination of the Hospital Corps and of all others who volunteered was taken up soon afterwards.

The response to the call for volunteers was prompt, and a comparatively large proportion of the Hospital Corps and many others from the line of the army requested the treatment. Up to the pres-

ent time, September 4, 1909, the number volunteering has been over 1,300, and sufficient vaccin for that number has been sent out. A suitable number of record cards and the following circular of instructions is furnished with each package of vaccin:

By direction of the Surgeon-General, a package containing ——— tubes of anti-typhoid vaccin has been sent you.

The dose is 0.5 c. c. for the first vaccination and 1 c. c. for the second, to be given ten days later; a third dose of 1 c. c. should be given after another interval of ten days.

The site of the inoculation is the arm at the insertion of the deltoid muscle. The dose is to be given subcutaneously, and not into the muscles nor into the skin. The arm should be cleaned as for any other operation. After the vaccin has been injected it is well to disinfect the needle puncture by touching it with a minute quantity of pure phenol or liquor cresolis comp., U. S. P. It is also suggested that you massage the injected area for a few minutes through a piece of sterile gauze.

The glass container should be washed off in an antiseptic solution and opened after making one or more cuts near the top with a file. The vaccin can be drawn out of the container with the syringe, or it may be emptied into a salt-cellar which has been sterilized by boiling.

The syringe and needles should be sterilized by boiling in 2 per cent soda solution. To insure perfect sterilization, draw the piston out to its full length, or remove it entirely, so that the barrel is full of water during the boiling. A fresh needle must be used for each man, or, if the same be used, it must be plunged into boiling soda solution to resterilize it.

The most suitable time for administration of the vaccin is about 4 o'clock in the afternoon, as the greater part of the reaction is then over before morning.

No applicant should be vaccinated who is not perfectly healthy and free from fever at the time, and it is advisable, in case of doubt, to take the temperature and to examine the urine; in the case of any man who has fever or any other signs of illness it should be postponed until he recovers. This precaution is necessary to avoid the vaccination of men who might be coming down with typhoid.

The men should be cautioned not to drink beer or liquor on the day of treatment.

The vaccin has been tested on human beings, and has produced, as a rule, a mild general reaction, although occasional severe responses occur. There is usually some headache and malaise, and a local reaction consisting of a red and tender area about the size of the palm of the hand, and sometimes tenderness in the axiliary glands. The entire reaction is over in forty-eight hours, and it seems best for the present not to require any duty for that period, nor to permit any active exercise such as long rides or walks. Some individuals may be very susceptible and develop a severe general reaction (headache, backache, nausea, vomiting, herpes labialis, and rarely albuminuria, and some loss of body weight). The number of severe reactions has been exceedingly small, and regardless of their severity they all disappear completely inside of forty-eight hours. No untoward results of any kind have ever been noted. If any severe reactions occur among your men, you are desired to report upon them in detail.

For every man inoculated a card must be filled out and sent to this office for file. A duplicate is to be retained at the post as part of the roster of men immunized against typhoid. Blanks are inclosed, and more will be furnished on request to this office. When the man changes station it should be forwarded to the surgeon at the new post. This is in addition to and quite separate from the cards required for all men on sick report. In filling out the record card it is not expected that the temperature of every man will be taken; many of the men will have no special symptoms and will not report to the surgeon unless directed to do so, and the reaction in such cases can be set down as none or mild, according to the history. It is, however, desired that the temperature of all men who report sick be taken and recorded.

Any vaccin remaining unused should be thrown away and a fresh vial opened for each day's vaccinations. It should be stored in the ice box.

Three doses undoubtedly give better protection than two, and while we can not hope to give the third dose to every man, it is expected that an effort will be made to administer it to as many as possible.

An interval of ten days between doses has been adopted, because experience shows that nothing is gained by giving the doses closer together. The production of large quantities of specific anti-bodies does not become evident until about eight to ten days after vaccination; the second dose is therefore not given until the first has become effective, since there may be a temporary fall in the quantity of protective bodies present in the serum after the administration of the second and third doses. We do not believe that there is any increased susceptibility following the first dose,

but that increased resistance begins immediately, although the degree of immunity produced is not very high until after the lapse of ten days. Ten days between doses is therefore the minimum interval. If it is not convenient to give the second dose at the regular time it may be postponed up to the fourteenth day, but it is not well to wait longer than this if good results are to be obtained.

We are frequently asked as to the duration of the immunity following vaccination. It is impossible to give an exact answer to this question, but there are some reasons for believing that it will last as long as the immunity acquired by an attack of typhoid fever. We find, for instance, that there is a much larger amount of some anti-bodies found in the serum after vaccination than after clinical typhoid.

If a man has been immunized by three doses, will it ever be necessary for him to take another course? Our experience with vaccination against smallpox has shown the wisdom of revaccination on exposure to the disease, and I think we may say that it would be wise to be reimmunized before going into a place where typhoid is epidemic.

The vaccin is well borne by larger children and by women, and it can be administered in doses proportioned to the body weight, taking one hundred and fifty pounds as the unit. Women should not be vaccinated during or near the time of menstrual period.

The vaccin will keep for six months and perhaps longer when it is stored at low temperature in the dark, but it is our plan to make most of it to order, and to administer it as soon after its preparation as is consistent with complete and thorough tests of its purity and sterility.

Completed record cards have been received from 830 individuals, distributed as follows: Officers, 127; noncommissioned staff, 2; Hospital Corps, 444; Coast Artillery Corps, 104; infantry, 99; civilians, male 22, female, 12; children 20. The comparatively large number of officers who have availed themselves of this method of protection is noteworthy. They constitute 15 per cent of the total number vaccinated, although they represent only 5.3 per cent of the authorized strength of the army. The distribution among the officers of the various branches of the service is as follows: Medical Corps, 85; infantry, 30; field artillery, 2; cavalry, 2; Engineer Corps, 2; Quartermaster's Department, 1; General Staff, 2; retired officers, 2. Their influence is further shown by the fact that most of the 54 civilians vaccinated are officers' children or other members of their families.

The total number of doses administered has been 2,242. An effort has been made to give three doses to as large a number as possible, and it is gratifying to be able to report that over 75 per cent have had this number. The number receiving two doses was 20 per cent, and those receiving only one dose was 5 per cent. Very few have refused to take the third, and fewer the second dose, but change of station and other incidents of the service are responsible for the failure of one-fourth of the volunteers to receive the full protective treatment. No untoward results of any kind have been reported in this comparatively large number of vaccinations.

The reaction following vaccination has already been described in a general way in the circular letter of instructions quoted above. Our experience to date has been that 92.1 per cent of the vaccinations produced no general reaction at all, or only a mild one; 6.6 per cent were of moderate severity; and only 1.2 per cent were severe. These figures show that the chances of being incapacitated for forty-eight hours after vaccination are quite small.

The amount of protection given by the vaccination, as judged by the quantity of specific protective anti-bodies in the patients' serum is very considerable, and in some ways it exceeds the quantities found

after recovery from an attack of typhoid fever. This leads us to believe that the duration of the immunity will last for a considerable time. The procedure has been introduced so recently that it is not possible to form any very exact idea of the protection given from statistics showing the morbidity and mortality from typhoid, but it is at least interesting to note that no cases of fever have appeared among the 830 who have been treated, although they have been exposed equally with the rest of the army.

There has been no opposition or objection of any sort to this procedure, and it is felt that it has now successfully passed the introductory stage and that its use should be rapidly extended, not only among the Hospital Corps but also to include the vaccination of volunteers from all organizations about to depart for duty outside of the United States proper, and among troops who may be ordered on extended practice marches or maneuvers.

LABORATORY INVESTIGATION OF OUTBREAKS.

At the same time it was determined to make arrangements for the systematic study of outbreaks of this disease in the army in order to facilitate the early diagnosis of the disease and detection of typhoid bacillus carriers and the period at which convalescent cases ceased to be infective and may be safely returned to duty. Arrangements were made so that the necessary bacteriological examinations could be made at the laboratory of the Surgeon-General's office in Washington, and at laboratories established in connection with the Post Hospital at Fort Leavenworth, Kans., and the General Hospital, San Francisco, Cal., and also in the laboratory for the board for the study of tropical diseases at Manila.

The following instructions were issued to post surgeons through chief surgeons of the departments:

In all cases of fever which possibly may be typhoid, and in which the diagnosis is in doubt, specimens of blood should be sent promptly by mail to the nearest laboratory with request for a bacteriological diagnosis. Experience has shown that the diagnosis of typhoid fever may be made by blood cultures much sooner and with greater certainty than by the Widal test.

Specimens of feces and urine from suspected typhoid carriers should also be sent to the laboratory for examination and report.

Hereafter no case convalescing from typhoid fever will be returned to duty until three negative reports on samples of urine and feces, collected at six-day intervals, have been made.

Every case of typhoid, or suspected typhoid, at a post will be reported at once by information slip to the chief surgeon of the department and a duplicate sent to the Surgeon-General.

Any typhoid patient who is not suffering from a relapse, and who continues to excrete typhoid bacilli after ten weeks from the beginning of his fever, should be reported to the chief surgeon of the department.

Suitable containers for urine, feces, and blood for the tests, with full directions for collecting the same, may be obtained from the nearest of the designated laboratories.

Besides investigations connected with typhoid fever, these laboratories will also, upon request, conduct other bacteriological investigations connected with infectious diseases.

It is the intention of this office to utilize the laboratories established at the General Hospital, San Francisco, Cal., and at Fort Leavenworth, Kans., for the examination of the water supplies of posts for which they are respectively the nearest laboratory, it having

been found that the bacteriological examinations in Washington of water shipped from the far western States is unsatisfactory on account of the length of time elapsing between the collection and examination. It is, of course, understood that where the facilities for bacteriological examinations of excreta exist at the posts they are made on the spot.

An opportunity was soon given to put into practice this method by the outbreak of an epidemic of typhoid fever at Fort Niagara, N. Y., where 16 cases appeared between January 7 and March 7, 1909. The garrison consisted of four companies of the Twelfth Infantry, about 365 officers, men, and civilians. The investigation of this outbreak was made by Maj. Charles F. Mason, Medical Corps, from this office, who makes the following report of his investigation:

Thirteen cases occurred in K Company between February 9 and 24, after which there was an interval of twelve days and then 1 more case.

The first 2 cases in Companies I and M may be considered sporadic, and were probably the result of drinking polluted water from the Niagara River, either at Niagara Falls, where Private D. was on furlough from December 12 to 20, or from the taps at the post.

The outbreak in K Company was distinctly a company epidemic. The tap water of the post may be excluded as a cause, because it is supplied to the whole post, while all the cases except 2 occurred in K Company.

Milk may be excluded for the same reason, and because only 4 of the typhoid patients admitted having used it at all. Raw shellfish had been used by only 1 of the patients and raw fruit or vegetables by none.

Six of the patients had not been absent from the post at any time within a month preceding their illness. Most of the others had been in Niagara Falls for at least a few hours during that period.

A careful laboratory examination of the blood, urine, and feces of all the members of K Company showed 9 men who had not been on sick report and whose blood gave a positive Widal reaction. One of this group also had typhoid bacilli in his feces on a single examination. This last man, Private R—l, denies ever having had typhoid fever. Two others admitted having had typhoid several years ago.

Neither the cooks of K Company gave a positive reaction to any of the laboratory tests.

Private R., of K Company, whose blood gave a positive Widal reaction and whose urine contained typhoid bacilli, had been on duty in the company mess very nearly a year. During this time he handled the dishes and food used by the men of the company.

Private R—l of K Company, whose blood gave a positive reaction and whose feces showed the presence of typhoid bacilli, was the company barber.

Privates D., M., and R. did duty as kitchen police after having been returned to duty from hospital following the attacks of so-called "influenza."

In my opinion the infection of the members of K Company was by a carrier or carriers. Private R. was probably the guilty party, though Private R—l and the men who did duty on kitchen police after returning from hospital may have contributed their share toward the later cases.

The disinfection of the barracks occupied by K Company and of the effects of the typhoid patients had not been thorough, and this fact may have also contributed to the result.

Where there are so many possible channels of infection with a company it is difficult or impossible to decide which was most concerned, but the evidence of company infection was overwhelming, and the lessons to be drawn are:

1. The importance of early and correct diagnosis, with the assistance of laboratory investigation. Had cases 4, 5, 6, 10, and 11 been suspected a correct diagnosis in at least 4 of them could have been made early by laboratory methods, and these cases would not have been returned to the company to prove a source of possible infection to others.

2. The necessity of prompt search for carriers and undiagnosed cases from the first suspicion of the presence of the disease.

3. The necessity of retaining in hospital all typhoid convalescents until they have been proven not to be carriers.

4. The importance of the utmost thoroughness in attention to the details of disinfection.

CEREBROSPINAL MENINGITIS.

Thirteen cases of this formidable disease, with 7 deaths, occurred during the year, which is a gratifying reduction from the preceding year's record of 33 cases with 20 deaths.

Five cases occurred at Columbus Barracks between the 26th of January and the 6th of May, of which 3 were fatal, in spite of the use of Flexner's antimeningococcus serum.

Four cases of this disease occurred at the recruit depot at Jefferson Barracks during the month of December and 2 others on the 10th and 11th of January, 1909. Maj. Percy M. Ashburn was sent to investigate this outbreak. A careful investigation was made by him to discover whether the source of infection might be a carrier—a test of great complexity, as the average enlisted strength of this depot is 1,500 men and an average of 40 new men were received daily. He studied in a very careful and painstaking manner the nasal secretions of about 70 persons constituting the permanent personnel with whom the patients came in contact, but in no case was the meningococcus found present in the nasal secretion.

Of the 6 cases, 2 died, in 1 the antimeningococcus serum not having been used because of its failure to arrive in time and in the other its use began only on the sixth day. Of the 4 cases in which the antimeningococcus serum was used promptly after the beginning of the attack all recovered.

A recruit who left Jefferson Barracks depot on January 12 for Fort Douglas, Utah, developed the disease at that post on January 23 and died.

MALARIA.

The occurrence of malarial fever, as shown by chart "O," continues to decrease in a most gratifying manner. The admission rate was 26.69 for 1908, as compared with 30.20 for 1907, which in its turn was the lowest rate on record in this office. So gratifying a diminution is the strongest evidence of the efficacy of the continued application of sanitary measures for the prevention of disease, based upon an accurate knowledge of its method of propagation. In the case of malaria, these are the screening of buildings, especially all porches, the use of head nets for guard duty, and measures directed against the propagation of mosquitoes, such as drainage, petrolization of breeding places, and the cutting of grass and bushes in the vicinity of posts.

Table No. 19 shows the relative incidence of the various forms of malarial infection for the past four years. The next table shows the 10 posts having the highest admission rate for this disease.

CHART O.—*Showing the relative admission and noneffective ratios per thousand of mean strength, for the decade, 1899–1908, for malarial fevers in the United States proper.*

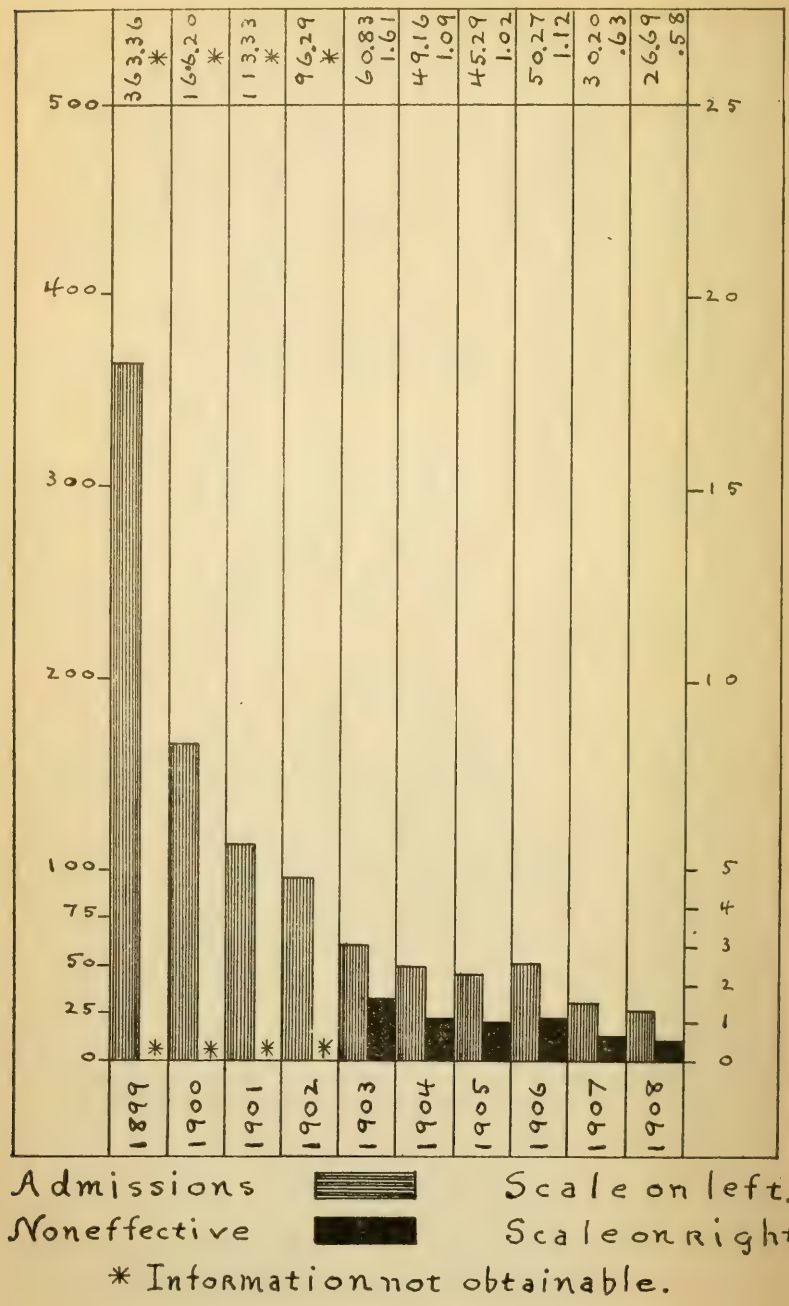


TABLE No. 19.—*Malarial infections.*

[Ratio per 1,000 of mean strength.]

	Admitted.			Discharged on surgeon's certificate of disability.			Died.			Noneffective.		
	Total.	White.	Colored.	Total.	White.	Colored.	Total.	White.	Colored.	Total.	White.	Colored.
Nonmalignant malarial infection:												
1908	24.53	24.71	12.43							0.49	0.50	0.18
1907	28.07	28.89	.96							.52	.53	.02
1906	44.71	46.46	17.73							.90	.94	.35
1905	1.87	1.87	1.80							.05	.05	.04
Malignant malarial infection:												
1908	1.68	1.71								.07	.08	
1907	1.74	1.79								.09	.09	
1906	1.70	1.76	.81				0.02	0.03		.08	.09	.03
1905	2.17	2.33	.30				.02	.03		.09	.10	.01
Undetermined malarial infection:												
1908	.15	.15								.002	.002	
1907	.14	.15								.005	.005	
1906	2.76	2.91	.40							.05	.05	.01
1905	39.80	41.94	14.42							.76	.80	.20
Malarial cachexia:												
1908	.32	.33								.01	.01	
1907	.26	.26								.02	.02	
1906	1.08	1.07	1.21	0.05	0.05					.76	.68	.20
1905	1.42	1.54		.07	.08					.12	.13	
Hemoglobinuric fever:												
1908										.001	.001	
1907												
1906	.02		.40							.001		.02
1905	.02	.03								.001	.001	
Total malarial diseases:												
1908	26.69	26.91	12.43							.58	.59	.18
1907	30.20	31.09	.96							.63	.65	.02
1906	50.27	52.20	20.56	.05	.05		.02	.03		1.12	1.16	.55
1905	45.29	47.71	16.53	.07	.08		.02	.03		1.02	1.09	.24

TABLE No. 20.—*The 10 posts having highest admission rates for malarial diseases.*

[Ratio per 1,000 of mean strength.]

	Mean strength.		Malarial diseases, total ratio.	
	1908.	1907.	1908.	1907.
Jefferson Barracks, Mo	900	706	152.22	89.24
Fort Clark, Tex	398	454	150.75	57.27
Fort Washington, Md	298	220	144.30	263.64
Fort Sill, Okla	377	239	98.14	41.84
Fort Logan H. Roots, Ark	192	122	93.74	8.20
Fort Howard, Md	350	232	82.86	185.34
West Point, N. Y	668	554	76.35	110.11
Fort Morgan, Ala	239	79	75.31	84.75
Fort Assiniboine, Mont	147	144	74.83	27.78
Fort Thomas, Ky	472	427	74.15	7.03
Total United States	46,316	35,132	26.69	30.20

Jefferson Barracks has advanced from seventh place last year to the first place, and Fort Clark, which did not appear on the similar table for 1907, is second. The former, being a recruit depot, has a transient population and the reasons for fluctuations in the occurrence

of malaria must be sought rather among the civil population from which the recruits were drawn than from conditions at the post.

The chief surgeon assigns the increase at Fort Clark to the fact that the post received a new garrison, coming from Camp Stotsenburg, P. I., one of the most malarious posts in the Philippines, and that the infections were in this way imported into the garrison rather than incurred at the post. A similar explanation is given for the increase at Fort Logan H. Roots, although the chief surgeon remarks also that the screening against mosquitoes was only completed during the summer of 1908, after many complaints by the medical officer. In his opinion, if this work had been done during the winter, as was recommended, the occurrence of malaria would have been reduced.

Fort Washington, Md., although having still a large admission rate, shows a great reduction in each succeeding year, the same being true of Fort Howard, Md.

The occurrence of this disease at Fort Sill, Okla., is attributed to low ground in the neighborhood of the post, which has not yet been effectively drained.

UNDETERMINED FEVERS.

The admission rate for these fevers was 3.80, as compared with 4.67 in 1907. This is less than one-half of the ratio for 1906, which was 7.73. The different diagnoses included under this head are shown in the following table:

Undetermined fevers.

Disease.	United States.	Alaska.	Cuba.	Hawaii.	Philippine Islands.	Transports.	Total army.
Febricula	51	.....	72	2	173	.....	298
Simple continued fever, cause unknown	39	.....	10	.....	43	.....	92
Fever, type undetermined	41	.....	34	.....	25	1	101
Ephemeral fever	32	2	5	.....	48	.....	87
Thermic fever	.....	.....	4	.....	9	.....	13
Continued fever, type undetermined	13	.....	2	.....	5	.....	20
Total	176	2	127	2	303	1	611
Ratios, year 1908	3.80	1.97	27.06	7.84	25.31	0.87	9.34

SMALLPOX.

Twelve cases of variola occurred during the year, coming from nine different stations. Two of these were hospital corps men who contracted the infection while nursing patients. In no other case does the disease appear to have been contracted at the post from the preceding case, with the possible exception of one at Fort Lawton, Wash. The three cases reported from Fort Mackenzie, Wyo., were all infected at the same time while en route to that post.

EXOPHTHALMIC GOITRE.

The surgeon at Fort Worden, Wash., reported 6 cases of this disease, and stated that it was prevalent in the near-by town of Fort Townsend. Fort Flagler, however, which has the same water supply as Fort Worden and the city, did not report any cases.

TUBERCULOSIS.

The admission rate for tuberculosis, 4.08, and the death rate, 0.40, are both less than for the preceding year, when the admission and death rate among colored troops were more than double those of white troops. The discharge rate, 2.77, was also less than for 1907, when it was 3.93. Although these rates show an improvement over the preceding years, they are larger than in the majority of the foreign armies.

From Table No. 76, page 202, it will be seen that whereas the occurrence of tuberculosis of the lungs in our army at home is 3.35, in the British army it is 1.9, and in both the German and Austro-Hungarian it is 1.4. It is believed that a factor in this increased occurrence must be a failure in our service to regulate the maximum number of occupants of barracks and guardhouses so as to prevent overcrowding. It is recommended, therefore, that the maximum number of men who should be allowed to occupy each dormitory or squad room be posted on the walls or door of each room, and that this number be limited so that each man shall have a minimum air space of 720 cubic feet; the height above 12 feet in rooms to be disregarded. In guardhouses, in cases of emergency, some degree of overcrowding may be excused, but this should, however, not be allowed beyond a minimum of 500 cubic feet, with the same disregard of height of ceilings over 12 feet.

An important factor in the occurrence of tuberculosis in the army is its prevalence in civil life, and the impossibility of detecting latent infections in recruits. The importance of this factor is shown in Table No. 21, in which it is seen that more than one-third of all cases of tuberculosis in the army occur in the first year of enlistment. The proportion of soldiers in the army serving their first year of enlistment is about 32 per cent.

TABLE No. 21.—*Occurrence of tuberculosis, 1908—American troops.*

	During first six months of service.	During second six months of service.	During second year of service.	During third year of service.	During fourth year of service.	During fifth year of service.	During sixth year of service.	During seventh year of service.	Total.
United States:									
Admitted	41	25	16	21	16	16	8	42	185
Duty	1	2	2	.....	.....	5	.....	9	19
Died	5	1	.....	2	[a]2	1	1	[a]7	19
Discharged on surgeon's certificate of disability	18	10	5	9	4	2	1	9	58
Remaining Dec. 31	16	11	6	9	10	8	6	17	83
Otherwise	1	1	3	1	.....	.....	.....	.....	6
Philippines:									
Admitted	6	15	10	5	12	8	4	13	73
Duty	1	.....	.....	.....	1	2	1	2	7
Died	.....	3	.....	1	3	.....	1	2	10
Discharged on surgeon's certificate of disability	.....	1	.....	.....	.....	.....	.....	1	2
Remaining Dec. 31	5	11	10	4	8	6	2	8	54

[a] One died of amebic abscess of the liver.

TABLE NO. 21.—*Occurrence of tuberculosis, 1908—American troops*—Continued.

	During first six months of service.	During second six months of service.	During second year of service.	During third year of service.	During fourth year of service.	During fifth year of service.	During sixth year of service.	During seventh year of service.	Total.
Cuba:									
Admitted	7	3	2	1	2	.....	3	3	21
Duty	.....	.....	.....	.....	.....	.....	1	.....	1
Discharged on surgeon's certificate of disability	1	1	.....	.....	1	.....	.....	.....	3
Remaining Dec. 31	6	2	2	1	1	.....	2	3	17
Alaska:									
Admitted	.....	1	.....	.....	.....	.....	.....	2	3
Duty	.....	.....	.....	.....	.....	.....	.....	1	1
Died	.....	1	.....	.....	.....	.....	.....	[a] 1	2
Hawaii:									
Admitted	.....	.....	.....	.....	.....	.....	.....	1	1
Remaining Dec. 31	.....	.....	.....	.....	.....	.....	.....	1	1
Transports:									
Admitted	2	.....	1	.....	.....	.....	1	.....	4
Duty	.....	.....	1	.....	.....	.....	.....	.....	1
Died	1	.....	.....	.....	.....	.....	1	.....	2
Discharged on surgeon's certificate of disability	1	.....	.....	.....	.....	.....	.....	.....	1
Total:									
Admitted	56	44	29	27	30	24	16	61	287
Ratios per 1,000 of total cases	195.12	153.31	101.05	94.07	104.53	83.62	55.75	212.54	1,000.00
Duty	2	2	3	.....	1	7	2	12	29
Died	6	5	.....	3	5	1	3	10	33
Discharged on surgeon's certificate of disability	20	12	5	9	5	2	1	10	64
Remaining Dec. 31	27	24	18	14	19	14	10	29	155
Otherwise	1	1	3	1	.....	.....	.....	.....	6

[a] One died of pneumonia.

NOTE.—Of the 295 cases admitted in 1908, 8 were returned to duty and readmitted, leaving 287 individuals to be accounted for, giving a ratio of 4.39 per 1,000 of mean strength; also, of the 33 deaths, 3 are recorded as dying of other diseases, leaving only 30 fatalities, a ratio of 0.5 per 1,000.

That company epidemics are not a feature in the spread of this disease is shown by the fact that out of 819 company organizations, including bands as such, during the year 1 case of tuberculosis occurred in each of 149 companies, 2 cases each in 24, 3 cases each in 2, and more than 3 cases in only 1 company.

Medical science now offers several test reactions by which the presence of tuberculosis in individuals can be demonstrated with a fair degree of accuracy, but as these tests respond to latent cases as well as to active tuberculosis, and as the former is very common in otherwise healthy men, to make the presence of latent tuberculosis the cause of rejection of recruits would be to very greatly limit the field from which the army can be recruited. It is to be anticipated, however, that the active campaign against tuberculosis which has been initiated in recent years, including a great tendency to segregate the infected in sanatoria, will, by reducing the amount of tuberculosis in the population, in like manner reduce the number of recruits which bring latent tuberculosis infection into the army.

INSANITY.

This class of affection showed a slight decrease also in the admission rate, which was 1.58, as compared with 1.79 for 1907.

ALCOHOLISM.

This cause of noneffectiveness steadily increased from year to year since 1898, as shown by Chart B, page 14, until this year, which shows a decided diminution, the ratio of admissions being 30.31, as compared with 36.09 for 1907. The admission rate for white, as compared with colored, troops is 30.47 to 20.72.

VENEREAL DISEASES.

Taking all the venereal diseases together, with their results, this class of infections continues to increase, as might be expected of any contagious disease against which the sanitary authorities take no measures of isolation or prevention. The increase is entirely in the admissions for gonorrhea, both syphilis and chancroids showing a diminished rate. The colored troops in the United States show a much higher admission rate for all of these diseases than the whites, the former being for all together 281.77, as compared with 173.14 for the latter. The greater incidence of syphilis in the colored race is especially marked. The following table gives the comparative rates for the past three years for each of these diseases:

TABLE NO. 22.—*Venereal diseases.*

	Admitted.			Discharged on surgeons certificate of disability.			Died.			Noneffective.		
	Total.	White.	Colored.	Total.	White.	Colored.	Total.	White.	Colored.	Total.	White.	Colored.
Gonorrhea, and results:												
1908	123.50	123.05	151.93	1.06	1.08	.....	.....	.....	.....	6.71	6.72	6.18
1907	107.68	107.68	107.59	1.39	1.37	1.92	0.03	.....	0.96	6.24	6.29	4.63
1906	105.21	106.11	91.49	1.07	1.11	.40	.02	0.03	.....	6.18	6.29	4.48
1905	118.31	120.12	92.05	1.29	1.25	1.80	.02	.03	.....	6.26	6.46	4.08
Chancroid:												
1908	28.20	27.64	63.54	.04	.02	1.38	.....	.....	.....	1.75	1.71	4.38
1907	34.78	34.38	48.03	.....	.....	.....	.....	.....	.....	2.23	2.21	2.73
1906	26.41	26.01	32.65	.05	.03	.40	.....	.....	.....	1.73	1.69	2.48
1905	30.39	30.27	31.85	.05	.05	.....	.....	.....	.....	1.90	1.88	2.08
Syphilis:												
1908	23.15	22.46	66.30	1.62	1.64	.....	.04	.04	.....	2.17	2.14	3.46
1907	25.36	25.43	23.05	2.36	2.43	.....	.....	.....	.....	2.75	2.76	2.45
1906	27.28	27.34	26.20	2.79	2.90	1.19	.05	.03	.40	2.98	3.02	2.40
1905	30.02	30.40	25.54	3.32	3.37	2.70	.02	.....	.30	2.88	2.93	2.34
Total venereal.												
1908	174.84	173.14	281.77	2.73	2.75	1.38	.04	.04	.....	10.63	10.57	14.02
1907	167.82	167.49	178.67	3.74	3.80	1.92	.03	.....	.96	11.22	11.26	9.81
1906	158.91	159.47	150.34	3.91	4.03	1.98	.07	.05	.40	10.90	11.00	9.36
1905	178.72	180.70	154.44	4.66	4.66	4.51	.04	.03	.30	11.05	11.27	8.50

The magnitude of the evil and the large loss from inefficiency in addition to humanitarian considerations, have induced the military authorities at a number of military posts to take earnest steps to

check the spread of these infections. Such steps have been the instruction of soldiers by lectures as to the danger of venereal diseases and the healthiness of continence; periodical inspections to detect and subject to medical observation and treatment those found diseased; the withdrawal of passes to be absent from the post of such, and the issue of preventive medicines for local application to such as will not be restrained by considerations of morality or prudence from exposure. These antiseptic applications are given only upon the personal request of individuals. If such steps were taken universally throughout the army and a campaign of education instituted which should reach each recruit from his admission to the service, it is believed that the evil record of the American Army might be greatly bettered.

UNCINARIASIS.

On December 7, 1908, Captain Joseph F. Siler, reported from the recruit depot at Fort Slocum, N. Y., that out of 19 southern recruits examined for uncinarial infection, 16 were found to be infected with hook worm. This report was sent to chief surgeons with the request that medical officers report any observations which they might make on this subject. A later report from Captain Siler covering 124 southern recruits showed 109 infections, a percentage of 87.9, which is even higher than the first report. These figures excluded men who had been many years away from their southern homes, or who had lived only a short time in southern cities. Observations made by Major Chamberlain at Jackson Barracks, in a very interesting report, gave the following figures:

TABLE NO. 23.

	Number examined.	Number infected with hookworms.	Per cent. infection.	Average length of service.
				Years.
Southern-bred recruits	44	30	68	
Southern-bred soldiers in first enlistment	57	31	54	1.1
Southern-bred soldiers in second or subsequent enlistment	34	5	15	6.4

Eight cases were reported from the recruit depot at Columbus Barracks, Ohio, but the number of examinations is not stated. Examination of 6 southern soldiers (not recruits) at Fort Walla Walla, Wash., showed one infection. At Fort Rosecrans 4 southern soldiers were examined, but none were found to be infected. The surgeon, Fort Fremont, reports 9 cases from among the patients admitted to hospital. The total number of cases examined is not stated, but as it is a one-company post, it may be assumed to be not large. The residence is reported as follows: Kentucky 5, Georgia 2, Indiana 1, Massachusetts 1. The two latter had been stationed at the post a year and a half, whereas in 6 of the other cases the residence at the post was less than six months, and in 4 it was two weeks or less.

At Fort Logan 100 men from all parts of the country were examined and none found to be infected. Taking together the figures for

southern recruits at Fort Slocum and Jackson Barracks, 139 infections are found in 168 men examined, being 82.74 per cent. So high a percentage among the selected candidates sent by the recruiting officers to depots for examination would indicate a very extensive degree of the infection among the rural population of the Southern States.

Both Captain Siler and Major Chamberlain agree that the physique of southern recruits is less vigorous and robust than is the case with those from other parts of the country, and they attribute this to the injurious influence of this infection in childhood and adolescence. The latter shows that the absolute weight of southern recruits is less than those from the North (although the former are taller) and that the weight of the infected individuals is less than that of those not infected. The statistics quoted by him deal, however, with numbers too small for safe deductions. The heights and weights of southern recruits given by him are above the average of white recruits for the whole army for the current year, and the fact that the weight to height proportion is less than for northern recruits may be due to racial or other causes, among which a less admixture of recent European immigrants may be a factor.

A further study of this question with larger numbers will prove of interest.

In the army of Cuban pacification, an examination of the entire command was made at seven posts, while at one, Pinar del Rio, it was limited to men of southern birth or residence. At Holguin the surgeon selected those of anemic appearance only, without regard to place of nativity or residence. The examinations at this post were made after the preliminary exhibition of a cathartic, which, as Captain Siler points out in his reports, is disadvantageous, owing to the great dilution of the feces caused by it. The following were the results of these examinations:

TABLE No. 24.

Post.	Number examined.	Number infected.	Per cent.	Number examined born or resided in Southern States.	Number infected.	Per cent.
Caibarien	137	.....	.....	46	.....	.....
Cardenas	295	46	15.6	50	13	26
Camp Columbia	1,086	8	.74	198	7	3.53
Cienfuegos	303	.....	.....	[a]	.....	.....
Placetas	270	7	2.6	33	7	21.2
Sagua La Grande	130	.....	.....	6	.....	.....
Morro Barracks	282	11	3.9	30	9	30
Pinar del Rio	51	.....	.....	51	.....	.....
Holguin	32	.....	.....	[a]	.....	.....
Total	2,586	72	2.8	414	36	8.7

[a] Not stated.

This study made on so large a scale is of great value as an index of the prevalence of this infection in the army. It shows that the proportion of infected men in this army (the marines not being included) was 2.8 per cent; of those having southern birth or residence 9 per cent; and of those having other than southern birth or residence, 1.6 per cent. Regarding the wide variation in the occurrence of the dis-

ease at the different posts, the chief surgeon, Lieut. Col. H. P. Birmingham, remarks:

Camp Columbia.—The ova were found in those born in or former residents of Southern States.

Cardenas.—At this post a peculiar condition seems to have existed. The majority of those infected were not from Southern States; 3 were foreign born, and 27 were from Northern or States not usually considered favorable to ankylostoma infection. Of the 46 infected only 16 were from Southern States. This seeming incongruity is explained by the surgeon as due to an infection existing throughout that belt of country.

Holguin.—Thirty-two specially selected cases were examined; 28 were anemic, 3 distinctly so and 25 slightly. At this post a saline purgative was administered. The findings were all negative. The surgeon remarks that boiled water has been constantly used for drinking, and uncooked vegetables seldom partaken of.

Pinar del Rio.—Fifty-one specially selected cases were examined, 49 of these were in excellent physical condition, the 2 remaining cases in which infection might have been expected proved negative.

Placetas.—At this post the examination seems to have been carried out in a particularly careful manner, and the findings would seem worthy of special consideration. Two hundred and seventy men were examined; 7, or 2.5 per cent, were infected. From the method of examination pursued at this post, it would seem that due weight should be attached to the findings as a more than fair index of the prevalence of ankylostoma as existing among the present enlisted personnel in the army, where local influences do not exist.

Santiago (Morro Barracks).—At this post also the examination seems to have been carried out in a very thorough and painstaking manner. Two hundred and eighty-two men were examined; 11, or 3.9 per cent, were infected. Of the 11 infected, 9 were born in Southern States; 1 during the past five years has resided in two Southern States and Cuba; and 1 has resided in States other than Southern, and for two years presumably has served in Cuba.

The examiner at Columbia Barracks expresses the opinion that infection in Cuba under the conditions of military service there is unlikely and this seems to be borne out by the fact that the infections there and at Placetas and Morro Barracks were almost exclusively among the southern men. At Cardenas, where most of the positive cases were not from the Southern States, these may have been, as suggested by the surgeon, a local source of infection.

The duration of this infection is an important question, since under the good hygienic conditions of military life infection in the service would seem not to be very probable. Of the cases reported from Cuba the length of the service is given in 24. Sixteen were in their first enlistment, 11 of these being in their first year; 4 were in their second enlistment; and 4 had served more than two enlistments. Of the 8 who had served more than three years it is noted that in addition to their two years' service in Cuba 5 had served within five years in one of the Southern States or the Philippines; in 1 the place of preceding service is not stated, and in 2 it was not in a recognized focus of infection. One of these men went from Mississippi to Fort Ethan Allen, Vt., where he remained until he went to Cuba; the other, a Pennsylvania miner of eight years' service, had been within five years in Pennsylvania, California, Wyoming, and New York. It seems that either the infection of these two men occurred in Cuba, or that the life of the parasite in the human intestines exceeds four years. A tabular statement of these cases is given below:

TABLE No. 25.

Number.	Length of service.		Born in	Within five years has lived in the following places before coming to Cuba.
	Yrs.	Mos.		
1		4	North Carolina	North Carolina and South Carolina.
2		4	do	North Carolina.
3		5	Georgia	Not stated.
4		5	North Carolina	Do.
5		5	Georgia	Do.
6		9	North Carolina	Georgia and Florida.
7		10	do	North Carolina.
8		10	Georgia	Not stated.
9	1	0	South Carolina	South Carolina.
10	1	0	do	Do.
11	1	0	do	Do.
12	1	0	Alabama	Alabama.
13	1	0	Kentucky	Kentucky.
14	1	3	do	Do.
15	1	4	Tennessee	Tennessee and Illinois.
16	2	6	Kentucky	Kentucky.
17	3	11	North Carolina	North Carolina, Maine, Maryland, and Tennessee.
18	3	11	Missouri	Georgia, Philippine Islands, and Nebraska.
19	4	0	Mississippi	Vermont.
20	4	8	Georgia	Not stated.
21	7	7	Massachusetts	Georgia and Philippine Islands.
22	7	8	Michigan	Philippine Islands.
23	8	9	Pennsylvania	Pennsylvania, California, Wyoming, and New York.
24	19	0	Germany	Virginia, Georgia, Philippine Islands and Nebraska.

All the observers note that in many cases the infection has no evident effect upon the health or appearance of the individual. This agrees with observations in the Philippines, both upon American soldiers and natives. Eosiniphilia is usually present, but not always; nearly one-fourth of the cases reported by Chamberlain showing less than 5 per cent. The hæmoglobin is in like manner usually below normal, but in most cases not greatly so. The diagnosis in mild cases must rest upon microscopic examinations of the feces and in cases where the parasites are few a number of slides must be often examined before eggs are found.

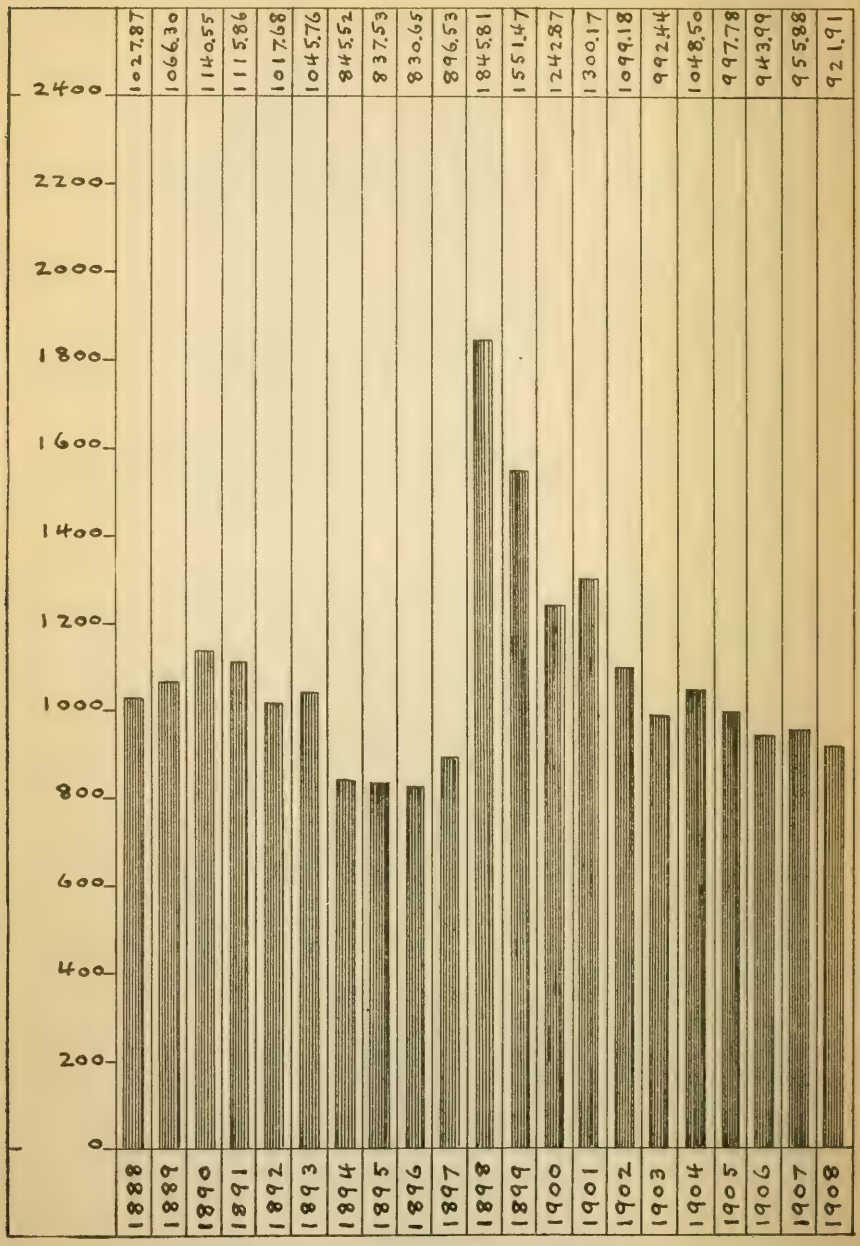
The tendency of the disease to disappear with length of service is well shown in Table No. 23. As cases do not pass the scrutiny of recruiting officers unless there is such toleration as to permit of a healthy appearance, and as when recognized, they yield readily to appropriate treatment, this disease, in spite of its vast economic importance in the Southern States, is believed not to affect greatly the health and efficiency of the army.

In 800 examinations of feces of healthy men at Camp Columbia, Cuba, it was noted that ova of ascaris lumbricoides were found eight times and oxyuris vermicularis twice, neither cercomonas, trichomonas, nor trichocephalus dispar were observed.

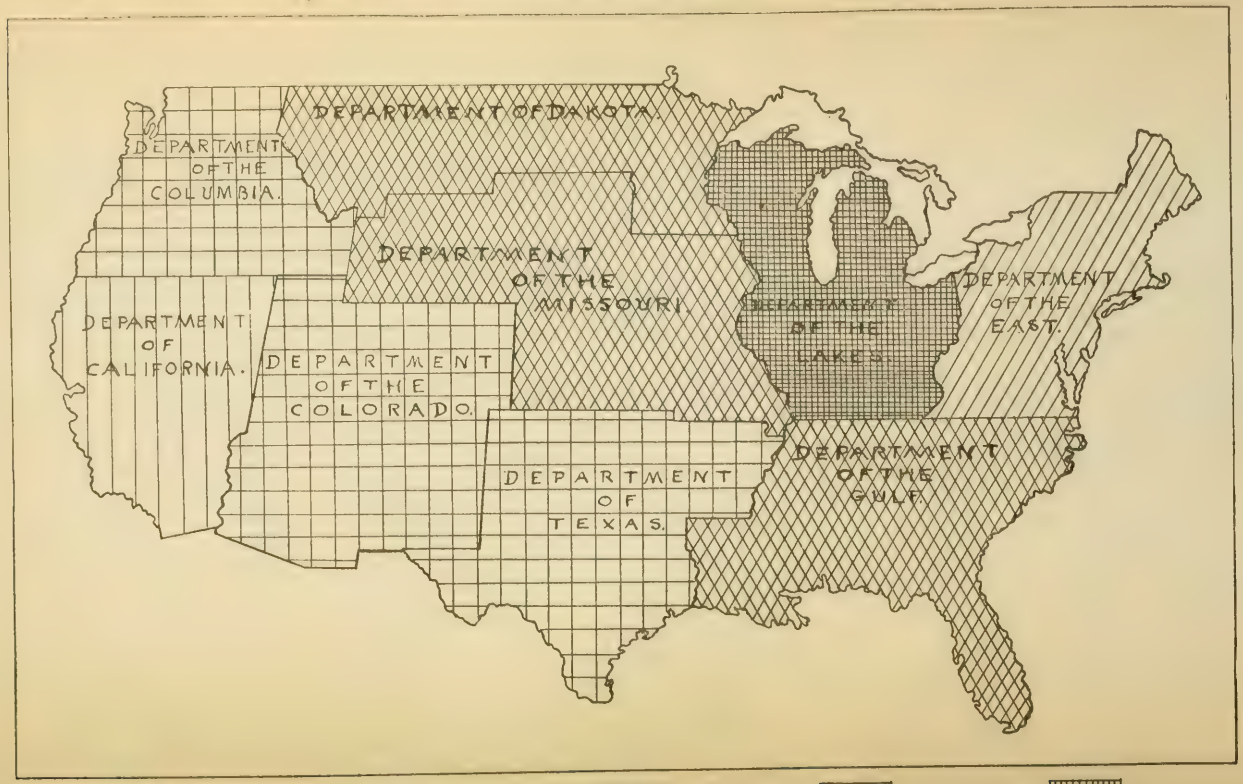
In 100 examinations at Fort Logan ameba coli was reported as found three times, ova of ascaris lumbricoides once, and strongylus intestinalis once.

In 15 examinations at Fort Fremont, S. C., of men admitted to hospital for various causes, cercomonas were reported twice, trichocephalus dispar once, and entomeba coli eight times.

CHART P.—*Showing the total admission rate for disease, by years, since 1888, for the United States proper.*



Military departments, United States, continental (excluding Alaska), showing relative admission rates for disease.



INFLUENCE OF STATION.

The post having the highest admission rate for the year was Fort Mott, N. J., and that having the lowest Fort Dupont, Del., the latter having likewise the lowest constant noneffective rate from all causes. These are neighboring posts upon opposite sides of the Delaware River and both garrisoned by coast artillery, the mean strength at Fort Mott being 225 and at Fort Dupont 332. No death from disease occurred at either post. An examination of the sick report from Fort Mott would indicate that the very high admission rate was not due to the prevalence of any special disease, but rather to the facility with which soldiers were excused from duty for a great variety of trifling illnesses.

Fort Benjamin Harrison, Ind., had the highest noneffective rate from all causes, Fort Thomas, Ky., being second; this post having been also second last year.

As regards relative health of military departments, the Department of the Lakes had the highest admission and noneffective rates and the Department of California the lowest. The Department of Colorado had the highest death rate and the highest rate for typhoid fever and pneumonia and the lowest rate for malaria and dysentery. The Department of California had the lowest rate for typhoid; the Department of Texas the highest rate for malaria; the Department of the Lakes the highest rate for cerebrospinal meningitis, tuberculosis, and dysentery, and the Department of Dakota had the lowest rate for tuberculosis. The Department of the East had the lowest rate for pneumonia, the Department of the Gulf had the highest rates for diarrhea and undetermined fevers, the Department of California the lowest rate for diarrhea, and the Department of the Missouri the lowest rate for undetermined fevers.

The following tables are arranged to show the posts having the highest and lowest ratios for admissions and noneffectiveness in the United States as a whole:

TABLE NO. 26.—*Posts having the highest admission and noneffective rates, 1908.*[a]

	Mean strength.	Ratios per 1,000 of mean strength.										Average number of days lost.			
		Admissions to sick report.		Discharges on surgeon's certificate of disability.		Deaths.		Total losses.		Noneffective from sickness.				From all causes.		Excluding injuries, venereal diseases, and alcoholism.	
										From all causes.		Excluding injuries, venereal diseases, and alcoholism.					
		From all causes.	Excluding injuries, venereal diseases, and alcoholism.	From all causes.	Excluding injuries, venereal diseases, and alcoholism.	From all causes.	Excluding injuries, venereal diseases, and alcoholism.	From all causes.	Excluding injuries, venereal diseases, and alcoholism.	Total.	In hospital.	Total.	In hospital.	For each soldier.	For each case.	For each soldier.	For each case.
Highest admission rates from all causes.																	
Fort Mott, N. J	225	2,715.56	1,933.33	26.67	13.33	4.44	.....	31.11	13.33	42.47	29.61	25.96	19.15	15.54	5.72	9.50	4.91
Key West Barracks, Fla	326	1,708.59	1,076.69	18.40	18.40	9.20	6.13	27.60	24.53	57.43	42.57	28.47	18.81	21.02	12.30	10.42	9.68
Fort Robinson, Nebr	388	1,626.29	994.85	46.39	38.66	2.58	.....	48.97	38.66	46.77	36.76	26.14	22.38	17.12	10.53	9.57	9.62
Fort Morgan, Ala	239	1,619.25	728.03	4.18	4.18	.....	.....	4.18	4.18	55.02	38.53	16.72	12.30	20.14	12.44	6.12	8.41
Fort Crook, Nebr	357	1,588.24	924.57	11.20	11.20	5.60	5.60	16.80	16.80	50.88	45.43	27.31	25.67	18.62	11.73	9.99	10.84
Highest admission rates, excluding injuries, etc.																	
Fort Mott, N. J	225	2,715.56	1,933.33	26.67	13.33	4.44	.....	31.11	13.33	42.47	29.61	25.96	19.15	15.54	5.72	9.50	4.91
Key West Barracks, Fla	326	1,708.59	1,076.69	18.40	18.40	9.20	6.13	27.60	24.53	57.43	42.57	28.47	18.81	21.02	12.30	10.42	9.68
Fort William Henry Harrison, Mont	250	1,492.00	996.00	40.00	36.00	16.00	8.00	56.00	44.00	44.56	38.17	27.80	23.96	16.24	10.88	10.18	10.22
Fort Robinson, Nebr	388	1,626.29	994.85	46.39	38.66	2.58	.....	48.97	38.66	46.77	36.76	26.14	22.38	17.12	10.53	9.57	9.62
Fort Baker, Cal	302	1,360.93	927.15	.....	.....	3.31	3.31	3.31	3.31	27.54	23.92	14.59	13.06	10.08	7.41	5.34	5.76
Highest noneffective rates from all causes.																	
Fort Benjamin Harrison, Ind	266	1,466.17	691.73	11.28	11.28	11.28	11.28	22.56	22.56	66.21	58.32	20.97	17.71	24.23	16.53	7.68	11.10
Fort Thomas, Ky	472	1,557.20	902.54	33.90	16.95	2.12	.....	36.02	16.95	60.97	50.11	29.58	24.17	22.31	14.33	10.83	12.00
Key West Barracks, Fla	326	1,708.59	1,076.69	18.40	18.40	9.20	6.13	27.60	24.53	57.43	42.57	28.47	18.81	21.02	12.30	10.42	9.68
Fort Caswell, N. C	260	1,392.31	780.77	11.54	7.69	7.69	7.69	19.23	15.38	55.73	47.09	25.54	22.10	20.40	14.65	9.27	11.88
Fort Morgan, Ala	239	1,619.25	728.03	4.18	4.18	.....	.....	4.18	4.18	55.02	38.53	16.72	12.30	20.14	12.44	6.12	8.41
Highest noneffective rates, excluding injuries, etc.																	
Fort Douglas, Utah	657	1,388.65	917.03	23.29	14.56	13.10	11.64	36.39	26.20	50.91	36.92	30.41	24.32	18.63	13.42	11.13	12.14
Fort Thomas, Ky	472	1,557.20	902.54	33.90	16.95	2.12	.....	36.02	16.95	60.97	50.11	29.58	24.17	22.31	14.33	10.83	12.00
Fort Mackenzie, Wyo	221	1,497.74	864.25	18.10	13.57	9.05	4.52	27.15	18.09	43.84	32.19	29.31	25.41	16.05	10.71	10.73	12.41
Key West Barracks, Fla	326	1,708.59	1,076.69	18.40	18.40	9.20	6.13	27.60	24.53	57.43	42.57	28.47	18.81	21.02	12.30	10.42	9.68
Fort Screven, Ga	265	1,364.22	844.11	11.41	11.41	7.60	7.60	19.01	19.01	48.16	36.04	28.12	22.60	17.63	12.95	10.29	12.19

[a] Recruit depots not considered.

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TABLE No. 27.—*Posts having the lowest admission and noneffective rates, 1908.*[a]

	Mean strength.	Ratio per 1,000 of mean strength.												Average number of days lost.			
		Admissions to sick report.		Discharges on surgeon's certificate of disability.		Deaths.		Total losses.		Noneffective from sickness.				From all causes.		Excluding injuries, venereal diseases, and alcoholism.	
										From all causes.		Excluding injuries, venereal diseases, and alcoholism.					
		From all causes.	Excluding injuries, venereal diseases, and alcoholism.	From all causes.	Excluding injuries, venereal diseases, and alcoholism.	From all causes.	Excluding injuries, venereal diseases, and alcoholism.	From all causes.	Excluding injuries, venereal diseases, and alcoholism.	Total.	In hospital.	Total.	In hospital.	For each soldier.	For each case.	For each soldier.	For each case.
Lowest admission rates from all causes.																	
Fort Du Pont, Del	332	424.70	225.90	3.01	3.01	6.02	.....	9.03	3.01	11.06	10.85	4.75	4.67	4.05	9.53	1.74	7.69
Presidio of Monterey, Cal	796	706.03	438.44	20.10	17.59	7.54	2.51	27.64	20.10	23.65	19.72	14.96	12.44	8.65	12.26	5.47	12.48
Presidio of San Francisco (Post), Cal	2,004	717.07	338.82	6.99	4.99	2.49	.....	9.48	4.99	4.47	.....	2.02	.....	1.64	2.28	.74	2.18
Fort Rosecrans, Cal	208	735.58	341.35	9.62	.....	.....	.....	9.62	.....	20.16	14.30	7.45	4.73	7.38	10.03	2.73	7.99
Fort H. G. Wright, N. Y	302	751.66	397.35	9.93	6.62	3.31	.....	13.24	6.62	23.21	22.02	11.44	11.35	8.50	11.30	4.19	10.53
Lowest admission rates, excluding injuries, etc.																	
Fort Du Pont, Del	332	424.70	225.90	3.01	3.01	6.02	.....	9.03	3.01	11.06	10.85	4.75	4.67	4.05	9.53	1.74	7.69
Presidio of San Francisco (Post), Cal	2,004	717.07	338.82	6.99	4.99	2.49	.....	9.48	4.99	4.47	.....	2.02	.....	1.64	2.28	.74	2.18
Fort Rosecrans, Cal	208	735.58	341.35	9.62	.....	.....	.....	9.62	.....	20.16	14.30	7.45	4.73	7.38	10.03	2.73	7.99
Fort Terry, N. Y	309	812.30	394.82	6.47	3.24	.....	.....	6.47	3.24	25.29	22.71	8.44	8.10	9.26	11.39	3.09	7.83
Fort H. G. Wright, N. Y	302	751.66	397.35	9.93	6.62	.....	.....	13.24	6.62	23.21	22.02	11.44	11.35	8.50	11.30	4.19	10.53
Lowest noneffective rates from all causes.																	
Fort Du Pont, Del	332	424.70	225.90	3.01	3.01	6.02	.....	9.03	3.01	11.06	10.85	4.75	4.67	4.05	9.53	1.74	7.69
Fort Hamilton, N. Y	462	785.71	435.06	10.82	6.49	.....	.....	10.82	6.49	19.47	18.56	8.99	8.56	7.13	9.07	3.29	7.56
Fort Schuyler, N. Y	228	837.72	407.89	8.77	8.77	4.39	.....	13.16	8.77	19.99	18.02	8.72	8.38	7.32	8.73	3.19	7.83
Fort Rosecrans, Cal	208	735.58	341.35	9.62	.....	.....	.....	9.62	.....	20.16	14.30	7.45	4.73	7.38	10.03	2.73	7.99
Fort Bliss, Tex	287	937.28	602.79	6.97	6.97	6.97	6.97	13.94	13.94	20.64	19.56	13.38	12.83	7.55	8.06	4.90	8.12

Lowest noneffective rates, excluding injuries, etc.																	
Fort Du Pont, Del	332	424.70	225.90	3.01	3.01	6.02	.....	9.03	3.01	11.06	10.85	4.75	4.67	4.05	9.53	1.74	7.69
Fort Rosecrans, Cal	208	735.58	341.35	9.62	.....	.....	.....	9.62	.....	20.16	14.30	7.45	4.73	7.38	10.03	2.73	7.99
Fort Wadsworth, N. Y	379	907.65	414.25	2.64	2.64	7.92	5.28	10.56	7.92	22.84	18.66	8.33	6.78	8.36	9.21	3.05	7.36
Fort Terry, N. Y	309	812.30	394.82	6.47	3.24	.....	.....	6.47	3.24	25.29	22.71	8.44	8.10	9.26	11.39	3.09	7.83
Fort Schuyler, N. Y	228	837.72	407.89	8.77	8.77	4.39	.....	13.16	8.77	19.99	18.02	8.72	8.38	7.32	8.73	3.19	7.83

[a] Recruit depots not considered.

RECRUIT DEPOTS—PROPORTIONAL NUMBERS.

Fort Slocum, N. Y	873	1,843.07	1,222.22	91.64	72.16	4.58	1.15	96.22	73.31	45.15	38.48	29.02	24.90	16.53	8.97	10.62	8.69
Jefferson Barracks, Mo	900	2,028.89	1,114.44	28.89	23.33	11.11	5.56	40.00	28.89	49.36	44.00	26.67	25.20	18.07	8.90	9.76	8.76
Columbus Barracks, Ohio	923	1,956.66	1,079.09	37.92	33.59	8.67	6.50	46.59	40.09	52.03	47.93	28.23	26.42	19.04	9.73	10.33	9.75

INFLUENCE OF AGE AND LENGTH OF SERVICE.

As usual, the admission and discharge and noneffective rates were highest for the younger soldiers or those serving their first enlistment, and the death rate was highest among those 50 years of age or over, having ten years or more service. The lowest admission and noneffective rates occurred in soldiers between 25 and 50 years of age, having long service.

The following table exhibits the effects of age and length of service upon rates for disease:

TABLE No. 28.—*Influence of age and length of service.*

Length of service.	Mean strength.	Admitted.	Discharged on surgeon's certificate of disability.	Died.	Constantly noneffective.	Ratio per 1,000 of mean strength.			
						Admitted.	Discharged on surgeon's certificate of disability.	Died.	Constantly noneffective.
Under 1 year	17,200	22,656	568	58	765.21	1,317.21	31.83	3.25	44.49
1 to 2 years	5,578	4,410	94	9	175.92	790.1	16.24	1.56	31.54
2 to 3 years	5,510	4,374	58	11	166.93	793.83	10.15	1.92	30.30
3 to 4 years	3,800	2,631	48	11	110.76	692.37	12.18	2.79	29.14
4 to 5 years	2,275	1,440	26	5	66.94	632.97	11.02	2.12	29.42
5 to 10 years	7,625	4,763	88	21	217.29	424.66	11.12	2.65	28.50
10 years and over	4,328	2,425	38	34	100.72	560.30	8.46	7.57	23.27
Total	46,316	42,699	920	149	1,603.75	921.91	19.15	3.10	34.63

Age.	Mean strength.	Admitted.	Discharged on surgeon's certificate of disability.	Died.	Constantly noneffective.	Ratio per 1,000 of mean strength.			
						Admitted.	Discharged on surgeon's certificate of disability.	Died.	Constantly noneffective.
19 years and under	2,244	3,248	59	3	95.91	1,447.42	25.35	1.29	42.74
20 to 24 years	19,884	22,633	473	61	799.26	1,138.25	22.91	2.96	40.20
25 to 29 years	12,627	9,973	236	30	402.42	789.82	18.02	2.29	31.87
30 to 34 years	6,054	3,819	101	14	163.73	630.82	16.09	2.23	27.04
35 to 39 years	2,900	1,571	30	14	72.44	541.72	9.97	4.65	24.98
40 to 44 years	1,459	826	12	10	36.68	566.14	7.93	6.61	25.14
45 to 49 years	804	408	7	12	21.49	507.46	7.92	14.39	26.72
50 years and over	344	221	2	5	11.83	642.44	5.62	14.04	34.39
Total	46,316	42,699	920	149	1,603.75	921.91	19.15	3.10	34.63

INFLUENCE OF SEASON.

Excluding venereal diseases, alcoholism, and injuries, the highest admission rate occurred in January and the highest death rate in May. The highest noneffective rate occurred in February. The lowest admission rate was in November, and the lowest death rate was the same for August and December. The lowest constantly noneffective was in September. The following table shows the movement of sick by months:

TABLE No. 29.—*Influence of season.*

Month.	Mean strength.	Ratio per 1,000 of mean strength. All causes. Admissions. Total.	All causes. Admissions. Hospital.	All causes. Deaths.	All causes. Noneffective. Total.	All causes. Noneffective. Hospital.	Exclusive of venereal diseases, alcoholism, and injuries. Admissions.	Exclusive of venereal diseases, alcoholism, and injuries. Deaths.	Exclusive of venereal diseases, alcoholism, and injuries. Noneffective.	Prevalling diseases (exclusive of venereal diseases, etc.).
Jan....	38,687	123.61	96.44	0.54	46.38	40.57	81.27	0.32	27.65	Influenza, 756; tonsillitis, 389; acute bronchitis, 185; coryza, 168; measles, 154.
Feb....	39,817	112.82	87.55	.49	49.17	42.57	77.50	.44	30.90	Influenza, 481; tonsillitis, 461; measles, 228; acute bronchitis, 168; mumps, 151; coryza, 145.
Mar....	40,858	111.31	85.37	.51	45.82	39.86	72.08	.41	28.81	Tonsillitis, 442; influenza, 269; measles, 189; acute bronchitis, 154; mumps, 154; muscular rheumatism, 112; coryza, 103.
Apr....	42,247	96.95	73.50	.45	43.59	37.73	60.48	.36	26.59	Tonsillitis, 278; measles, 129; acute bronchitis, 127; muscular rheumatism, 119; diarrhea and enteritis, 117; influenza, 108.
May....	43,977	88.41	67.40	.73	40.24	35.01	52.37	.26	23.56	Tonsillitis, 205; diarrhea and enteritis, 132; muscular rheumatism, 101; constipation, 95; malaria, 86; furuncles, 86.
June...	46,736	83.55	57.88	.46	38.20	32.69	45.04	.15	21.02	Diarrhea and enteritis, 227; furuncles, 126; tonsillitis, 120; dyspepsia, 120; malaria, 108.
July....	47,441	89.96	58.77	.35	38.32	32.22	49.47	.14	20.52	Diarrhea and enteritis, 347; furuncles, 138; malaria, 128; tonsillitis, 126; dyspepsia, 119.
Aug....	50,000	94.68	54.18	.43	37.95	32.41	54.54	.12	20.84	Diarrhea and enteritis, 622; malaria, 201; furuncles, 145; dyspepsia, 135; tonsillitis, 127; constipation, 106; muscular rheumatism, 100.
Sept...	49,464	89.38	62.25	.46	37.88	33.20	46.50	.27	18.87	Diarrhea and enteritis, 227; malaria, 179; tonsillitis, 159; furuncles, 149; dyspepsia, 126; constipation, 110.
Oct....	51,009	93.31	69.77	.26	40.98	35.98	50.32	.15	20.41	Malaria, 213; tonsillitis, 211; diarrhea and enteritis, 161; furuncles, 146; muscular rheumatism, 141; acute bronchitis, 138; dyspepsia, 127; constipation, 102.
Nov....	51,980	87.11	65.89	.42	39.86	34.69	44.42	.26	19.68	Tonsillitis, 308; acute bronchitis, 152; muscular rheumatism, 148; furuncles, 114; dyspepsia, 100.
Dec....	53,578	89.14	70.05	.34	39.65	34.72	48.81	.12	20.44	Tonsillitis, 395; acute bronchitis, 181; furuncles, 139; muscular rheumatism, 135; coryza, 113; dyspepsia, 104.
Total	46,316	1,148.59	837.55	5.35	41.19	35.70	669.38	2.89	22.89	Tonsillitis, 3,221; diarrhea and enteritis, 2,153; influenza, 1,898; acute bronchitis, 1,523; furuncles, 1,355; muscular rheumatism, 1,328; malaria, 1,236; dyspepsia, 1,163; constipation, 1,037.

INFLUENCE OF RACE.

For 1908 the rates for admission and discharge were higher for the white troops, and the rates for death and constantly noneffective were higher for the colored troops in the United States (continental), whereas for 1907 all the rates, except admission, were higher for the colored troops.

The relative prevalence of the several diseases in the two races is shown in Table No. 70 at the end of this report.

DISCHARGES FOR DISABILITY.

The disability discharge rate for the United States (continental) for 1908 was 21.35, as compared with 25.36 for 1907 and 32.29 for 1906. This reduction is probably due to the fact that regulations now require all recruits to be examined by a medical officer before enlistment.

The principal causes of discharges, with the percentage of the total discharges, were as follows: (1) Tuberculosis, 14.46; (2) venereal diseases, 14.24; (3) congenital malformation and arrested development, 9.89; (4) epilepsy, 6.63; (5) insanity, 6.20. The proportion of total discharge for those discharged for disabilities contracted previous to entrance to service was 47 per cent.

The following table shows the causes of discharges for disability for the year 1908, United States (continental):

TABLE No. 30.—*Discharges for disability, year 1908.*

Cause of discharge.	Number discharged.	Percentage of total discharges.	Discharges for disability.				
			In line of duty.	Not in line of duty.		Discharged for disability before assignment.	
				Contracted before enlistment.	Contracted after enlistment.	In line of duty.	Not in line of duty.
DISEASES.							
General diseases	341	37.07	156	60	125	6	22
Tuberculosis (of the lungs, 123; other organs, 10)	133	14.46	120	13	.....	4	5
Venereal diseases	131	14.24	.....	24	107	.....	13
Syphilis (primary, 3; secondary, 59; tertiary, 16)	78	8.48	.....	16	62	.....	8
Gonorrhea (rheumatism, 28; chronic gonorrhea, 14; orchitis, 3; ophthalmia, 2; stricture, 2; other results, 2)	51	5.54	.....	8	43	.....	4
Chancroids and results	2	.22	.....	.....	2	.....	1
Chronic articular rheumatism	21	2.28	15	6	.....	1	1
Chronic alcoholism	17	1.85	.....	6	11	.....	2
Drug habit (morphinism, 7; cocainism, 5)	12	1.30	.....	5	7	.....	.....
Chronic amebic dysentery	8	.87	8	.....	.....	.....	.....
Exophthalmic goiter	5	.54	4	1	.....	.....	.....
Results of typhoid fever	2	.22	2	.....	.....	.....	.....
Results of acute articular rheumatism	2	.22	2	.....	.....	.....	.....
Diabetes	2	.22	2	.....	.....	.....	.....
Chronic lead poisoning	2	.22	.....	2	.....	.....	.....
Aphonia following measles	1	.11	1	.....	.....	.....	.....
Cerebro-spinal fever	1	.11	1	.....	.....	1	.....
Purulent infection	1	.11	1	.....	.....	.....	.....
Addison's disease	1	.11	.....	1	.....	.....	1
Leukemia	1	.11	.....	1	.....	.....	.....
Anemia	1	.11	.....	1	.....	.....	.....

TABLE No. 30.—*Discharges for disability, year 1908*—Continued.

Cause of discharge.	Number discharged.	Percentage of total discharges.	Discharges for disability.				
			In line of duty.	Not in line of duty.		Discharged for disability before assignment.	
				Contracted before enlistment.	Contracted after enlistment.	In line of duty.	Not in line of duty.
DISEASES—continued.							
Diseases of the nervous system	166	18.04	40	116	10	.....	54
Epilepsy	61	6.63	2	59	.....	.....	18
Insanity	57	6.20	26	25	6	.....	3
Other diseases of the nervous system (unstable nervous organization, 7; hysteria, 4; obscure disease of system, 2; somnambulism, 1; masturbation, 1)	15	1.63	2	12	1	.....	9
Neurasthenia	11	1.20	1	9	1	.....	.....
Melancholia	5	.54	.....	5	.....	.....	4
Diseases of the spinal cord (myelitis, 1; poliomyelitis, 1; ataxic paraplegia, 1)	3	.33	3	.....	.....	.....	.....
Chorea	3	.33	.....	3	.....	.....	.....
Locomotor ataxia	2	.22	1	.....	1	.....	.....
Paralysis without specified cause	2	.22	1	1	.....	.....	.....
Chronic sciatica	2	.22	1	1	.....	.....	.....
Cerebral meningitis	1	.11	.....	1	.....	.....	.....
Cerebral hemorrhage	1	.11	1	.....	.....	.....	.....
Cerebral embolism	1	.11	1	.....	.....	.....	.....
Nostalgia	1	.11	.....	.....	1	.....	.....
Neuritis	1	.11	1	.....	.....	.....	.....
Congenital malformations and arrested development	91	9.89	.....	91	.....	.....	16
Diseases of the circulatory system	83	9.02	45	37	1	4	5
Organic diseases of the heart	53	5.76	34	19	.....	4	3
Functional diseases of the heart	18	1.96	5	12	1	.....	2
Varicose veins	4	.43	1	3	.....	.....	.....
Chronic pericarditis	2	.22	1	1	.....	.....	.....
Aneurism	2	.22	2	.....	.....	.....	.....
Phlebitis	2	.22	2	.....	.....	.....	.....
Pseudo angina pectoris	1	.11	.....	1	.....	.....	.....
Hemophilia	1	.11	.....	1	.....	.....	.....
Diseases of the digestive system	58	6.30	27	29	2	2	16
Hernia (inguinal, 27; ventral, 3)	30	3.26	11	18	1	2	14
Chronic gastritis	7	.76	3	4	.....	.....	1
Appendicitis	4	.43	2	1	1	.....	.....
Chronic enteritis	3	.33	2	1	.....	.....	.....
Chronic diarrhea	2	.22	1	1	.....	.....	.....
Intestinal obstruction	2	.22	1	1	.....	.....	.....
Cirrhosis of the liver	2	.22	2	.....	.....	.....	.....
Gastric ulcer	1	.11	1	.....	.....	.....	.....
Chronic dyspepsia	1	.11	.....	1	.....	.....	.....
Chronic sprue	1	.11	1	.....	.....	.....	.....
Chronic constipation	1	.11	.....	1	.....	.....	1
Fistula in ano	1	.11	1	.....	.....	.....	.....
Chronic prolapse of rectum	1	.11	.....	1	.....	.....	.....
Hepatic abscess	1	.11	1	.....	.....	.....	.....
Cholecystitis	1	.11	1	.....	.....	.....	.....
Diseases of the organs of special sense	50	5.43	24	25	1	.....	2
Diseases of middle and internal ear (otitis media, 20; deafness, 6)	26	2.83	11	15	.....	.....	1
Diseases of the globe (retinitis, 5; atrophy of the optic nerve, 3; diseases of the choroid, 2; iritis, 1; keratitis, 1; sclerotitis, 1)	13	1.41	11	2	.....	.....	.....
Errors of refraction	4	.43	1	3	.....	.....	.....
Trachoma	3	.33	.....	3	.....	.....	1
Amblyopia	2	.22	.....	1	1	.....	.....
Senile cataract	1	.11	1	.....	.....	.....	.....
Defective vision	1	.11	.....	1	.....	.....	.....
Diseases of the genito-urinary system	44	4.78	7	37	.....	.....	14
Diseases of the bladder (chronic cystitis, 1; enuresis, 35; vesical calculus, 1)	37	4.02	1	36	.....	.....	13
Diseases of the kidneys (Bright's disease, 4; perinephritic abscess, 1)	5	.54	4	1	.....	.....	1
Diseases of the testicles (orchitis, 1; epidymitis, 1)	2	.22	2	.....	.....	.....	.....
Diseases of the organs of locomotion	37	4.02	14	23	.....	.....	2
Diseases of the joints (flat feet, 6; synovitis, 5; arthritis, 4; bunions, 3; bursitis, 3; floating cartilages, 2; tendo-synovitis, 1; hammer toes, 1; metatarsalgia, 1)	26	2.83	11	15	.....	.....	2

TABLE NO. 30.—*Discharges for disability, year 1908*—Continued.

Cause of discharge.	Number discharged.	Percentage of total discharges.	Discharges for disability.				
			In line of duty.	Not in line of duty.		Discharged for disability before assignment.	
				Contracted before enlistment.	Contracted after enlistment.	In line of duty.	Not in line of duty.
DISEASES—continued.							
Diseases of the organs of locomotion—Continued.							
Diseases of the bones (periostitis, 2; curvature of spine, 2; necrosis, 1; exostosis, 1; callus metacarpal bones, 1)	7	.76	3	4	.....	.....	.....
Muscular rheumatism	3	.33	.....	3	.....	.....	.....
Loss of muscular power	1	.11	.....	1	.....	.....	.....
Diseases of the respiratory system	30	3.26	14	16	.....	.....	4
Diseases of the lungs (asthma, 8; pleurisy, 7; chronic bronchitis, 7; penumoconiosis, 1; fibrous process at apex left lung, 1)	24	2.61	13	11	.....	.....	3
Chronic nasal catarrh	4	.43	.....	4	.....	.....	1
Chronic hypertrophy turbinate bones	1	.11	.....	1	.....	.....	.....
Goiter	1	.11	1	.....	.....	.....	.....
Diseases of the skin and cellular tissue (corns, 5; eczema and pemphigus, 5; bromidrosis and hyperidrosis, 4; parasitic diseases, 2; ingrowing nails, 1; chronic ulcer, 1)	18	1.96	3	15	.....	1	3
Ill-defined diseases (polyuria)	2	.22	1	1	.....	.....	.....
Total	920	89.67	331	450	139	13	118
EXTERNAL CAUSES.							
Secondary results of injuries	36	33.96	1	35	.....	.....	3
Gunshot wounds	25	23.58	19	.....	6	.....	.....
Fractures	24	22.64	15	.....	9	.....	1
Incised wounds	7	6.60	5	.....	2	1	.....
Lacerated wounds	5	4.72	5	.....	.....	.....	.....
Sprains	2	1.89	2	.....	.....	.....	.....
Crushing	2	1.89	2	.....	.....	.....	.....
Contusions	2	1.89	2	.....	.....	.....	.....
Dislocation	1	.94	1	.....	.....	.....	.....
Muscular strain	1	.94	1	.....	.....	.....	.....
Burn	1	.94	1	.....	.....	.....	.....
Total	106	10.33	54	35	17	1	4
Grand total	1,026	1,000.00	385	485	156	14	122

SANITATION.

The hygienic errors noted in the monthly sanitary reports of medical officers are in most cases of minor importance and susceptible of correction by local authorities. In such cases remedial action is as a rule promptly taken without the necessity of intervention of higher authority, thus giving a gratifying demonstration of the progress made by the officers of the line of the army in a realization of the importance of safeguarding the health of the troops. The uncorrected errors are usually those which require action on the part of the War Department or of Congress because they involve the outlay of large sums of money. Such are necessary improvements in water supply, sewer systems, and barrack construction.

As the population of the country increases and posts are more and more surrounded by a dense civil population, the necessity of securing pure sources of water supply becomes more urgent and the difficulty

of safeguarding them increasingly difficult; also the duty becomes imperative of making such disposition of wastes as will not be offensive or dangerous to the surrounding population. In such matters it is believed that the National Government should take the lead. Some form of biological or other purification of sewage will probably be necessary for a large number of posts in the near future. Such plants are expensive to install, but when once constructed of adequate size and on proper principles, are inexpensive in operation. It is believed that if projects for such constructions were presented to Congress, liberal provision would be made for them, since the public safety is so obviously concerned. A case in point is the water supply and sewage disposal of Fort Sheridan, Ill. This large and important post, in common with a population of 3,000,000 which dwells on the shores of Lake Michigan, and which is increasing at the rate of 100,000 a year, must draw their water supply from the lake. Lake Michigan has no currents except the shifting ones due to the force of the winds, and the process of purification of sewage poured into it proceeds slowly. In spite of the diversion of the sewage of a large portion of the city of Chicago through the drainage canal into the Illinois River, the southern end of the lake is being grossly contaminated by the ring of populous communities surrounding it, including that part of the city of Chicago south of Sixty-seventh street, which discharges its sewage into the lake through the Little Calumet River. An organization has been formed called the Lake Michigan Water Commission, with representatives from the three States interested, to check this constantly increasing contamination. The War Department must necessarily cooperate in this laudable movement.

The commanding-general of the Department of the Lakes, Maj. Gen. F. D. Grant, states the case forcibly as follows:

> Fort Sheridan is doing its share toward polluting its own and neighbor's water supply, for the sewage of that post is emptied into the lake about half a mile from the intake of its water system. If, as the commanding officer reports, there is no sickness in the post traceable to the water supply, such must be attributed to good fortune, and the present happy situation is likely to be reversed any day. It is my opinion that a sewage-disposal plant should be installed at Fort Sheridan for several reasons. It is manifestly absurd for Fort Sheridan to pollute its own water supply, which is what is now being done. Should a man deliberately drain his privy into his well he would be doing little more than what the situation presents at Fort Sheridan. Then, too, the Government is under obligation not only to preserve the health of its soldiers by providing the best sanitary arrangements, but to set an example to its citizens in such arrangements.
>
> The communities on either side of this post have taken steps to purify their sewage and the obligation is imperative that the same action be taken by the Government for Fort Sheridan.

It will probably be also necessary either to carry the intake farther out into the lake or to filter the water before its admission to the mains of the post. A somewhat similar case as regards water supply is that of Fort Niagara, which draws its water from the Niagara River, near its mouth, where it is much polluted. A sample of water taken from the lake at a point half a mile from shore and 1½ miles from the mouth of the river was found to be also unsafe.

The post was protected from typhoid fever during the year by the troublesome expedient of boiling all its drinking water, a procedure which is certain, sooner or later, to be neglected by careless or indolent persons, with unfortunate results. It has been recommended by this

office that, as a cheap electric supply is available, the purification of the water supply by ozone be considered.

A few posts are, however, at present obliged to boil their drinking water, and in all such cases this measure should be considered as one of a temporary nature and arrangements made for a permanent pure supply for all purposes.

At Fort Leavenworth the source of water supply is from the Missouri River, the intake being about 1,000 yards below the outlet of the post sewer. To prevent the contamination of the water supply, a purification plant for the sewage has been established, but it is reported as unsatisfactory because of the unfinished condition of the filtration beds. A sanitary inspection in October showed that for the purification of the water 10 organizations depended upon the use of Pasteur Chamberlain filters; 3 to sterilizing the water with Forbes water apparatus; 8 boiled it in other ways; and 1, out of abundant precaution, after the water had passed through the Forbes sterilizer, boiled it again. No efficient method of cleaning and supervising the Pasteur filters seems to have been used, so that the water after passing through them gave a far higher bacteriological count than the water drawn from the taps without filtration. The bacteriological count in the former case was from 2,500 to 500,000 colonies per cubic centimeter, while in the tap water it was only 800.

The water supply at the Presidio of San Francisco, Cal., and at Fort Thomas, Ky., and at Fort Logan, Colo., is reported as suspicious and requiring to be boiled for drinking purposes.

At Fort Meade, S. Dak., the water supply is inadequate. It is understood that steps are being taken to correct the deficiencies at all these places.

DISPOSAL OF WASTES.

Defects in the methods of disposal of sewage have been noted at a number of posts, but as a rule these deficiencies have been corrected. As noted above, the sewage purification plant at Fort Leavenworth has not functioned satisfactorily during the year, and as is the case with Fort Sheridan also the purity of the water supply is dependent to a considerable extent upon the proper purification of the sewage.

At Fort Benjamin Harrison it was reported that although the septic tank and contact filters worked well, the sand filter, which is intended to further purify the effluent so as to remove all putrescible matter from it, has failed to function satisfactorily because of faulty construction. The plant has also been overworked by passing through it a much larger volume of sewage than it was intended to handle.

The sewage, therefore, has been discharged into a neighboring stream without the high standard of purification required by the specifications prepared in the office of the Quartermaster-General.

Complaints have also been made of defects in the sewer systems at Key West and Jackson Barracks, but as there is doubt of the permanence of both of these posts in their locations, the remedial measures must of necessity be of temporary nature.

Reports of overcrowding of barracks and guardhouses together with defective ventilation, which have been sent in by medical officers with increasing frequency since the increase of the army in 1901,

have assumed large proportions in the year just passed, when the strength of the army has been increased without a proportionate gain of barrack space for their accommodation. Such conditions have been reported not only from posts in the United States, but also from the Philippines.

From a number of the permanent stations in the United States overcrowding has been reported during the year.

The chief surgeon, Department of the East, in his annual report states:

> The artillery posts, with few exceptions, and two of the infantry posts report overcrowding of barracks and guardhouses. Measures of relief, by better ventilation, by temporarily quartering men in other buildings or tents, and by hastening completion of barracks have been generally adopted, and it is confidently expected that in a short time each enlisted man and prisoner in the department will have sufficient floor and air space for his proper accommodation, except possibly at Forts Wadsworth and Jay, where present quarters must of necessity be used until the new barracks are built. The attention which has been drawn to this matter of overcrowding and insufficient ventilation can not but have beneficent results in increased efficiency and the prevention of epidemics of influenza, coryza, and tonsillitis, which have occurred in the past. It has been necessary in the case of some of the guardhouses to exercise administrative clemency to reduce the number of prisoners therein.

Overcrowded condition of barracks at Forts Revere and Adams, to which attention was called by the surgeon of the post in each case, was relieved by the transfer of a company from each post to another station. More common and more excessive than overcrowding of barracks was that of the guardhouses at a number of posts. This was reported to be due in part to the fact that the military prisons were full and military convicts were left to serve their sentences at a number of posts instead of being transferred to the military prisons. The following examples of excessive overcrowding in guardhouses were reported, the figures given being cubic feet air space per capita:

Fort Yellowstone, Wyo	285
Fort Adams, R. I	284
Fort Porter, N. Y	204
Fort Sill, Okla	279
Fort Huachuca, Ariz	150

To put a stop to this abuse, it has been several times recommended in specific instances that orders be issued to post commanders that under no circumstances should the number of individuals occupying the guardhouses be permitted to exceed such a number as will allow a minimum of 500 cubic feet per capita cubic air space.

In many cases marked deleterious effects upon the health of the command are stated to have been the result of the overcrowding and defective ventilation. Diseases of the respiratory organs, especially tonsillitis, pharyngitis, bronchitis, and tuberculosis, have been attributed to these causes. That such conditions do contribute powerfully to the prevalence of the diseases mentioned is beyond question. Improved housing of troops in the British army has been followed by a progressive fall in the tuberculosis rate which is now only about one-half that in our service.

The recommendation made in the last report of this office is renewed—that there should be a fixed standard of floor and air space in barracks and guardhouses—and it is believed that the adoption of such a standard is one of the most important sanitary reforms which the welfare of the army now demands.

While in most of the new barracks adequate provision has been made for ventilation, there seems to have been often a failure to make proper use of the means provided, the natural tendency of soldiers being to close up all openings in cold weather. To effectually remedy this an active cooperation of the company officers with the medical officers is necessary.

In previous reports attention has been called to the importance of certain insects, flies, and mosquitoes as carriers of disease, and the necessity for thorough screening of barracks and quarters at posts where these insects are found has been insisted upon. Sanitary reports continue, however, to refer to the insufficient nature of the screening which is being done, especially the use of half-screens in windows, and of screen doors without intervening vestibules. Half-screened windows are practically useless in barracks because the unscreened portion of the window is constantly being left open. It is recommended that all window screens be made full length as is now required in hospitals and that all screen doors be double, with an intervening vestibule.

Continued effort has been made during the year to control those diseases which are causing the largest number of deaths and the greatest amount of inefficiency in the army. Especially has this been the case with venereal diseases, tuberculosis, and typhoid fever. Instructions on these subjects have been sent to all medical officers.

CAMPS OF INSTRUCTION.

The health of the commands in the camps of instruction of 1908 was remarkably good. Typhoid fever, which in the camps of 1906 caused 101 admissions, in 1908 gave a total of only 17 admissions, these including all the cases contracted on the march to and from camp as well as those which occurred in camp. Other infectious diseases were also notable by their comparative absence from the sick returns. From several of the camps, however, the chief surgeons have reported that militia commands arrived at the camps with one or more members already ill with typhoid fever, which must have commenced before they started for camp. To prevent just such a danger as this in the field, paragraph 663 (F. S. R.) was devised. This paragraph, however, does not seem to exactly cover the case of militia commands proceeding to camps of instruction, and it is therefore recommended, as a matter of much importance, that a critical examination be made of each militia organization by a regular medical officer of experience as soon as it reaches a camp of instruction, with a view to the segregation of all cases of contagious disease.

The sanitary conditions in the camps were generally good. From most of them it was reported that insufficient provision was made for the protection of food from dust and flies, which defect should be corrected in future camps, as it opens the way for the spread of typhoid fever and other intestinal complaints.

Very few of the permanent camps had a piped water supply, and none of them a sewerage system. Both of these items should be provided for in all permanent camps. The water supply of the camp at Leon Springs, Tex., was reported entirely insufficient for the needs

of the command, but it was expected that this deficiency could be made good without much difficulty. At the camp at Chickamauga Park there were two water supplies—one for drinking and one for other purposes. Such a double source of water supply is highly objectionable, and it is recommended that for future maneuvers on this site a sufficient supply of pure water for all purposes be secured and no other water piped to the grounds. The water supply of the camp at Fort D. A. Russell is said to have been unsatisfactory in quality and to have caused intestinal troubles.

From all camps came the usual reports of the insufficient number of medical officers and hospital corps men, though all available officers and men were taken from posts to supply the field commands as far as possible. The entire medical personnel thus obtained was scarcely sufficient to care for the sick and entirely inadequate to man the field organizations of the medical department, which should properly belong to the commands of which they form a part. This is a very serious condition, and shows the disastrous results which may be expected in time of war unless a more liberal allowance of personnel, both officers and men, is provided than that now authorized.

From every camp also was reported the usual deficiency of transportation for the medical department, so that it was impossible to move those medical department organizations which are normally mobile. This, also, is a serious condition and emphasizes the importance of the recommendations frequently made by this office that the medical department organizations should be supplied with and should keep on hand ready for instant use their full quota of field transportation. The four companies of the Hospital Corps should have the full transportation and equipment of ambulance companies and be prepared to take the field as such at a moment's notice.

Nearly all chief surgeons reported an insufficient number of ambulances, and that those supplied were of several different patterns, most of them incomplete, and many unserviceable. The absence of lamps from the ambulances seriously impaired their efficiency for night work.

A model ambulance has been adopted after most careful and painstaking investigation on the part of a board composed of experienced officers of the Medical and Quartermaster's departments. It is recommended that this type of ambulance be promptly issued to all posts, the obsolete patterns being called in and remodeled, or in the case of patterns not susceptible of being remodeled that they be either condemned or converted to other uses at the posts, the red cross, in this event, being removed from them and they being no longer considered as medical transportation. In addition a reserve of new ambulances should be accumulated by annual installments at the depots of the Quartermaster's Department, which should be sufficient for the needs of the maximum army which can be put in the field within a space of one month. Under present conditions the Medical Department is entirely dependent in this respect upon the Quartermaster's Department, and it is useless for the former to proceed with its preparations for war conditions unless the latter will provide pari passu the essential equipment which it is obligated to supply.

The great majority of the militia commands are reported as having been insufficiently equipped with medical supplies, and many of them without any at all. Many of their medical officers apparently did not know what supplies they should have nor how they could obtain them. The preparedness of their medical departments for active service was generally reported as woefully deficient. A medical officer should be attached to the Militia Division of the War Department, whose special duty it should be to advise and assist in the organization of the Medical Department of the militia, so as to put them on a plane of preparedness in this essential respect. The appropriations for the equipment of the militia are liberal, and the Medical Department has on hand ready for issue the needed equipment. If the attention of the military authorities of the States is called to the necessity for the organization of field hospitals and ambulance companies and the necessity of such provision in order that they may be considered to have the organization contemplated by the law, it will undoubtedly be done. It is recommended that the state authorities be required to organize and thoroughly equip a field hospital with its ambulance company for each three regiments, in addition to the regimental medical service.

ALASKA.

The average mean strength of the troops serving in Alaska during the year was 1,015, composed of infantry, Signal Corps, and Hospital Corps, all white. The totals in Table No. 31 show the admission, death, and noneffective rates. Table No. 31 shows also the influence of station and gives the total number of sick by posts. Table No. 32 gives the rates by months, with the prevailing diseases for each month.

Alaska still maintains its record as the healthiest territory in which American troops are stationed, the total admission and constantly noneffective rates having continuously improved each year since 1905. The rates for the year 1908 are 419.70 and 12.99, as compared with 657.62 and 21.22 for the year 1907. The death rate is larger than in previous years, being 9.17, as compared with 3.40 for 1907, there having been in all 10 deaths as compared with 3 in the preceding year. This increase is due to the large proportion of deaths by violence from the following causes: Drowning, 3; suicide, 2; freezing, 1; and cerebral hemorrhage, caused by a boxing contest, 1.

The principal causes of admission were tonsillitis 23, muscular rheumatism 14, and acute bronchitis 13. There were 6 admissions for appendicitis, all of which recovered. One case of typhoid fever occurred during the year. The highest admission and noneffective rates were in February, the lowest admission rate was in June, and the lowest noneffective rate in May.

Four enlisted men were invalided home, of whom 2 were discharged for disability, 1 died, and 1 returned to duty.

TABLE No. 31.—*Influence of station.*

	Mean strength.	Ratios per 1,000 of mean strength.												Average number of days lost.			
		Admissions to sick report.		Discharges on surgeon's certificate of disability.		Deaths.		Total losses.		Noneffective from sickness.				From all causes.		Excluding injuries, venereal diseases, and alcoholism.	
										From all causes.		Excluding injuries, venereal diseases, and alcoholism.					
		From all causes.	Excluding injuries, venereal diseases, and alcoholism.	From all causes.	Excluding injuries, venereal diseases, and alcoholism.	From all causes.	Excluding injuries, venereal diseases, and alcoholism.	From all causes.	Excluding injuries, venereal diseases, and alcoholism.	Total.	In hospital.	Total.	In hospital.	For each soldier.	For each case.	For each soldier.	For each case.
Fort Gibbon	226	305.31	172.57	.....	.....	8.85	.....	8.85	.....	10.03	7.65	4.81	3.52	3.67	12.03	1.76	10.21
Fort St. Michael	145	324.14	137.93	.....	.....	13.79	6.90	13.79	6.90	8.99	7.57	4.03	3.62	3.29	10.15	1.48	10.70
Fort Liscum	180	366.67	194.44	.....	.....	5.56	.....	5.56	.....	10.88	9.78	5.60	4.93	3.98	10.86	2.05	10.54
Fort William H. Seward	174	500.00	178.16	11.49	11.49	5.75	.....	17.24	11.49	10.74	10.11	3.77	3.71	3.93	7.86	1.38	7.74
Fort Davis	151	523.18	258.28	.....	.....	13.25	13.25	13.25	13.25	14.33	11.49	9.16	8.12	5.24	10.01	3.35	12.97
Fort Egbert	138	565.22	376.81	14.49	.....	14.49	.....	28.98	.....	26.25	19.05	10.37	7.98	9.64	17.00	3.80	10.08
Total	1,015	419.70	212.81	3.67	1.83	9.17	2.75	12.84	4.59	12.99	10.55	6.06	5.10	4.75	11.33	2.22	10.42

TABLE NO. 32.—*Influence of season.*

Month.	Mean strength.	Ratios per 1,000 of mean strength.								Prevailing diseases (exclusive of venereal diseases, etc.).
		All causes.					Exclusive of venereal diseases, alcoholism, and injuries.			
		Admissions.			Noneffective.					
		Total.	Hospital.	Deaths.	Total.	Hospital.	Admissions.	Deaths.	Noneffective.	
Jan....	981	33.64	25.48	.....	17.72	10.82	20.39	... .	9.60	Tonsillitis, 2.
Feb....	978	41.92	26.58	1.02	16.64	12.06	25.56		11.18	Tonsillitis, 4; acute bronchitis, 2; diseases of the larynx,2; appendicitis,2.
Mar....	948	31.65	22.15	1.03	11.43	8.54	16.88	1.03	8.81	Influenza, 2; tonsillitis, 2; muscular rheumatism,2.
Apr....	924	41.13	22.73	.....	10.43	7.94	22.73	..	6.64	Acute bronchitis, 5; muscular rheumatism, 3.
May....	992	39.31	25.20	.94	7.28	5.40	22.18	.94	4.46	Influenza, 4; muscular rheumatism, 3; diseases of the larynx, 2.
June...	984	26.42	24.39	.92	8.10	7.11	12.20	....	4.27	Muscular rheumatism, 2.
July....	980	41.84	33.67	.83	13.76	12.54	17.55	....	4.74	Coryza, 3; gastritis, 3; furuncles,3; tonsillitis,2.
Aug....	1,068	35.58	29.96	.....	14.62	12.93	19.66	....	5.62	Gastritis, 4; tonsillitis, 3; furuncles, 3; muscular rheumatism, 3.
Sept...	1,068	30.90	26.22	.....	14.61	12.48	16.85	.. .	4.53	Tonsillitis, 2.
Oct....	1,087	34.04	22.08	.86	14.04	11.99	10.12	.....	3.65	Coryza, 2; dyspepsia, 2.
Nov....	1,090	28.44	20.18	.86	13.36	11.99	12.84	.....	5.26	Tonsillitis, 4.
Dec....	1,077	36.21	31.57	2.60	13.36	11.89	17.64	.87	4.97	Articular rheumatism, 2; tonsillitis, 2; appendicitis, 2.
Total ..	1,015	419.70	310.34	9.17	12.99	10.55	212.81	2.75	6.06	Tonsillitis, 23; muscular rheumatism, 14; acute bronchitis, 13; gastritis, 10; influenza, 9; furuncles, 9; articular rheumatism, 8.

CUBA.

The average mean strength of the troops pertaining to the army serving in Cuba was 4,694, all white. As shown in Table 3, all the admission and discharge for disease rates are somewhat higher than last year, while the death, discharge for injury, and constantly noneffective rates are less. The latter rates are also less than for the United States during 1908.

The principal causes of admission were venereal diseases 202.17, abscesses and furuncles 101.19, diarrhea and enteritis 57.73, dyspepsia 42.82, malaria 39.20, alcoholism 36.43, and bronchitis 27.48. The rates for the last five diseases are all decidedly less than the year before, and although the admissions for venereal diseases are greater, the constantly noneffective rate for them is less. As was the case in 1907, typhoid fever is the principal cause of death, as shown in the following table, but yellow fever caused only 1 death, as compared with 5 in the preceding year.

TABLE No. 33.—*Deaths among troops serving in Cuba in 1908.*

Causes.	Number.	Ratio per 1,000 of—	
		Mean strength.	Total deaths.
DISEASES.			
Typhoid fever	5	1.05	416.67
Cerebrospinal fever	2	.42	166.67
Yellow fever	1	.21	83.33
Cancer of the liver	1	.21	83.33
Acute endocarditis	1	.21	83.33
Acute gangrenous intestinal obstruction, caused by omental hernia	1	.21	83.33
Appendicitis	1	.21	83.33
Total for diseases	12	2.53	545.45
EXTERNAL CAUSES.			
Gunshot wounds (suicides, 4; accidental, 2)	6	1.26	600.00
Fracture of skull (fall from horse)	1	.21	100.00
Concussion of the brain (fall out of window of barracks)	1	.21	100.00
Drowned (accidental, while swimming)	1	.21	100.00
Traumatic peritonitis homicidal (caused by being jumped upon in drunken brawl)	1	.21	100.00
Total for external causes	10	2.10	454.55
Grand total	22	4.63	1,000.00

PREVALENCE OF SPECIAL DISEASES.

TYPHOID FEVER.

Forty cases of this disease with 5 deaths occurred, of which 24 were in the month of January. An epidemic of 25 cases occurred between December 21, 1907, and January 26, 1908, at Columbia Barracks, a part of which shares, with Havana, the advantage of an unimpeachable water supply. The chief surgeon reports as follows concerning it:

An outbreak of typhoid fever appeared among the troops of the Second Squadron, Eleventh Cavalry, and Company I, Signal Corps, immediately after their return from the target range at Guanajay, at which point they had been on duty from November 25 to December 21, 1907, and where the disease originated.

The first case was admitted to the hospital three days after reaching the post, the man having complained of feeling badly two days before leaving camp. The others, with the exception of three men, who will be referred to later, were taken sick within the next three weeks, all having been infected in camp.

The point selected as a camp site was an excellent one, with unlimited room, good drainage, and an abundant water supply from a limestone spring, which was of good quality. The surrounding country was open and rolling, with a pleasant outlook in all directions.

As this camp was to be used as a target range for the entire command at Camp Columbia during the target season, it should have been considered a permanent one. This, however, was not done, but the old pit latrine established, and the water was distributed by barrels throughout the camp, while the spring was not adequately protected from possible pollution. The Forbes sterilizer was in general use. On account of the shallow and rocky soil the latrines had to be frequently changed, so that this unsanitary contrivance was at its worst.

Upon an unofficial visit to this camp about December 5, I found the conditions as stated and made a report to the chief surgeon, as medical inspector of the army, citing these conditions and embodying certain recommendations for their correction, including protection of the source of water supply, the establishment of a pumping plant and reservoir, and the installation of the McCall incinerators.

These recommendations were carried out and thereafter this camp was in all sanitary respects a model one.

An analysis of the water and the fact that the command which preceded and followed this one remained perfectly free from the disease shows that neither the water or other conditions pertaining to the camp were responsible for the origin of the disease, and furthermore, a careful inspection of the town of Guanajay, with Capt. David Baker, Medical Corps, of the post of Guanajay, and the local health officer, showed the town to be free from typhoid fever, and the fact that the men from the adjoining permanent post of Guanajay (at which post typhoid fever had not appeared for a year) visited the town daily and ate and drank there without infection, is corroborative proof that the disease was not contracted in this town.

A careful analysis of the cases demonstrates to a practical certainty that the disease was introduced by an ambulatory or walking case of typhoid, in the person of a sergeant of the Signal Corps, who had been sick since the latter part of October, but who did not go on sick report while in camp, and who was finally admitted to hospital with what proved to be a mild case of typhoid fever. He was quartermaster and mess sergeant of the company, so it will be seen how intimate were his relations with the men and how readily he could act as a disseminator of infection.

The exact means by or through which this soldier was infected I have been unable to determine, but members of the Signal Corps, in pursuance of their work as linemen and repairmen, are constantly moving about, and it is well known that typhoid fever in a sporadic form prevails in many Cuban towns, and it is believed that the original infection was acquired in that way.

As three of the cases were either cases of prolongated incubation or infection after their return to barracks—a month having elapsed in each case since leaving camp—as a precaution against barrack infection, this part of the command was put in tents and thorough disinfection of the barracks, equipment, and personal effects of the men was carried out. After this disinfection no other case of fever appeared, and Camp Columbia has been free from the disease since.

The occurrence of the disease by organizations was: Company I, Signal Corps, 9; and in the Second Battalion, Eleventh Cavalry, Troop F, 4; G, 6; H, 4. There were two additional cases, one a hospital corps man, who became infected while nursing his comrade sick with the disease, and an engineer soldier, who lived in camp in close proximity to Company I, Signal Corps, and was closely associated with one of the early cases in Troop H. In Company I, Signal Corps, 6 of the 9 cases were in a group of four adjoining tents, one of which was occupied by Sergeant E, who is regarded as the carrier who originated the epidemic. In Troop F, 3 out of the 4 cases occurred in two adjoining tents. In Troop G, 5 out of the 6 cases occurred in three adjoining tents. In Troop H, 3 out of the 4 cases occurred in two adjoining tents.

This epidemic is a marked example of what is believed to be a most common and serious method of infection among troops in camp, viz, by contact from man to man.

The following table, No. 34, shows the occurrence of typhoid fever at the various military stations in Cuba:

TABLE NO. 34.—*Typhoid fever at military stations in Cuba, 1908.*

Station.	Admitted.	Days treated.	Constantly sick.	Died.
Camp Columbia	21	2,028	5.54	3
Santiago	4	378	1.03	.....
Field, Cuba	4	5	.01	.....
Matanzas	2	68	.19	1
Cardenas	2	88	.24	.....
Holguin	2	176	.48	.....
Cienfuegos	1	110	.30	.....
Guanajay	1	44	.12	.....
Placetas	1	69	.19	.....
Caibarien	1	60	.16	.....
Santa Clara	1	171	.47	1
Pinar del Rio	.....	15	.004	.....

UNDETERMINED FEVER.

The occurrence of this group was greater in absolute number and ratio than in 1907, the ratios being 27.06, as compared with 20.96. The marked diminution of the malarial fevers with the increased number diagnosed as given in the following table shows the growing indisposition on the part of the medical officers to use the diagnosis malaria as a nosological dumping ground for obscure febrile conditions in the absence of definite clinical or microscopical evidence to support such a diagnosis.

TABLE No. 35.

Febricula	72
Simple continued fever, cause unknown	10
Fever, type undetermined	34
Ephemeral fever	5
Thermic fever	4
Continued fever, type undetermined	2
Total	127

MALARIAL FEVERS.

The admission rate for malarial fevers was noticeably better than the year before, being 39.20 as compared with 51.40 for 1907 and 26.69 for the United States for 1908. This improvement is due to a corresponding amelioration of the conditions of living in the army of Cuban pacification due to improvements in the temporary barracks, the substitution of beds for camp cots whereby more effective use could be made of mosquito nets, and by the withdrawal of troops from some of the smaller stations where adequate provisions for their comfort did not exist.

DYSENTERY.

This infection is not very prevalent in Cuba, the admission rate being 6.82, of which just one-half was amebic—the rate for the Philippines being 26.23.

YELLOW FEVER.

Five cases with one death occurred in February, 1908, in the garrison at Santa Clara, which was composed of a battalion of the Fifteenth Cavalry. Four of these cases occurred in Troop K, and one in Troop M. No other cases occurred during the year in the army and the vigorous campaign which was carried on by the provisional government of intervention resulted in its extinction throughout the island.

The following table shows the morbidity and mortality of the different stations.

TABLE NO. 36.—*Influence of station.*

	Mean strength.	Ratio per 1,000 of mean strength.											Average number of days lost.			
		Admissions to sick report.		Discharges on surgeon's certificate of disability.		Deaths.		Total losses.		Noneffective from sickness.				From all causes.		Excluding injuries, venereal diseases, and alcoholism.	
										From all causes.		Excluding injuries, venereal diseases, and alcoholism.					
		From all causes.	Excluding injuries, venereal diseases, and alcoholism.	From all causes.	Excluding injuries, venereal diseases, and alcoholism.	From all causes.	Excluding injuries, venereal diseases, and alcoholism.	From all causes.	Excluding injuries, venereal diseases, and alcoholism.	Total.	In hospital.	Total.	In hospital.	For each soldier.	For each case.	For each soldier.	For each case.
Camp Columbia	1,672	820.57	456.34	34.69	21.53	4.19	3.59	38.88	25.12	36.94	32.95	22.85	21.06	13.52	16.48	8.36	18.32
Camaguey	467	1,074.95	672.38	14.99	10.71	2.14	.....	17.13	10.71	33.15	26.74	20.84	17.48	12.13	11.29	7.63	11.34
Matanzas	283	1,409.89	819.79	17.67	14.13	3.53	3.53	21.20	17.66	27.16	19.67	14.74	11.34	9.94	7.05	5.40	6.58
Pinar del Rio	278	1,334.53	773.38	3.60	.....	.....	.....	3.60	.....	38.47	34.15	21.12	19.06	14.08	10.55	7.73	10.00
Cardenas	252	972.22	563.49	3.97	3.97	7.94	.....	11.91	3.97	23.00	20.12	11.88	10.15	8.42	8.66	4.35	7.72
Santiago	238	1,605.04	907.56	8.40	8.40	4.20	4.20	12.60	12.60	47.00	38.32	26.28	22.28	17.20	10.72	9.62	10.60
Holguin	233	1,476.39	854.08	21.46	21.46	4.29	.....	25.75	21.46	46.27	40.55	27.30	23.95	16.94	11.47	9.99	11.70
Cienfuegos	206	2,587.38	1,597.09	29.13	24.27	14.56	4.85	43.69	29.12	81.11	60.53	42.36	30.72	29.68	11.47	15.50	9.71
Guanajay	202	1,673.27	1,069.31	4.95	4.95	14.85	4.95	19.80	9.90	47.53	44.81	29.54	28.32	17.40	10.40	10.81	10.11
Placetas	186	2,026.88	1,198.92	5.38	5.38	.....	.....	5.38	5.38	63.61	50.41	31.04	24.75	23.28	11.49	11.36	9.48
Caibarien	122	983.61	467.21	49.18	24.59	.....	.....	49.18	24.59	41.61	40.18	16.06	15.30	15.23	15.48	5.88	12.58
Sagua la Grande	105	1,590.48	1,019.05	38.10	38.10	.....	.....	38.10	38.10	39.86	39.29	22.77	22.56	14.59	9.17	8.33	8.18
Santa Clara	58	2,448.28	1,379.31	34.48	.....	34.48	34.48	68.96	34.48	97.93	62.04	55.92	40.80	35.84	14.64	20.47	14.84
Guines	56	2,053.57	1,178.57	53.57	53.57	.....	.....	53.57	53.57	43.08	.....	22.78	.....	15.77	7.68	8.34	7.08
Field and miscellaneous	336	696.43	464.29	.....	.....	2.98	.....	2.98	.....	5.94	.41	3.79	.25	2.17	3.12	1.39	2.99
Total	4,694	1,201.75	706.22	21.46	14.73	4.63	2.53	26.09	17.26	38.53	31.94	22.20	18.89	14.10	11.74	8.12	11.50

The highest rate for admissions was at Cienfuegos, for discharges at Guines, and for deaths, total losses, noneffective rate, and days lost by each soldier, Santa Clara.

INFLUENCE OF AGE AND LENGTH OF SERVICE.

The following table shows the effects of length of service and age upon morbidity and mortality rates:

TABLE No. 37.—*Influence of age and length of service.*

Length of service.	Mean strength.	Admitted.	Discharged on surgeon's certificate of disability.	Died.	Constantly noneffective.	Ratios per 1,000 of mean strength. Admitted.	Discharged on surgeon's certificate of disability.	Died.	Constantly noneffective.
Under 1 year	1,584	1,893	57	6	61.19	1,195.08	35.54	3.74	38.63
1 to 2 years	852	771	8	1	25.69	904.93	9.28	1.16	30.15
2 to 3 years	794	670	12	1	27.82	843.83	14.94	1.25	35.03
3 to 4 years	231	179	4	1	6.38	774.89	17.09	4.27	27.62
4 to 5 years	190	165	2	.....	5.60	868.42	10.36	.....	29.47
5 to 10 years	705	529	14	3	18.12	750.35	19.61	4.20	25.70
10 years and over	338	249	2	.....	7.78	736.69	5.85	.....	23.02
Total	4,694	4,456	99	12	152.58	949.30	20.83	2.53	32.51

Age.	Mean strength.	Admitted.	Discharged on surgeon's certificate of disability.	Died.	Constantly noneffective.	Ratios per 1,000 of mean strength. Admitted.	Discharged on surgeon's certificate of disability.	Died.	Constantly noneffective.
19 years and under	191	253	4	1	7.98	1,324.61	20.73	5.18	41.76
20 to 24 years	2,289	2,423	53	6	83.35	1,058.54	22.88	2.59	36.41
25 to 29 years	1,203	1,046	21	2	35.46	869.49	17.24	1.64	29.48
30 to 34 years	564	415	15	3	14.80	735.82	26.27	5.25	26.25
35 to 39 years	257	178	4	.....	5.63	692.61	15.32	.....	21.89
40 to 44 years	113	70	1	.....	2.64	619.47	8.70	.....	23.38
45 to 49 years	67	55	1	.....	2.29	820.90	14.71	.....	34.17
50 years and over	10	16	.....	.....	.43	1,600.00	.....	.....	43.44
Total	4,694	4,456	99	12	152.58	949.30	20.83	2.53	32.51

The admission, discharge, and noneffective rates are highest for soldiers in their first year of service, the death rate being highest in the fourth year of service. As regards age, the admission and noneffective rates were highest in soldiers over 50, but this class, which is very small (10 individuals), furnished neither deaths nor discharges. The death and discharge rates were highest in men between 30 and 34 years.

The lowest admission and discharge rates with no deaths were in men between 40 and 44, while the noneffective rate was slightly ower in the preceding class between 35 and 39.

INFLUENCE OF SEASON.

The following table shows the movement of sick, by months:

TABLE NO. 38.—*Influence of season.*

Month.	Ratios per 1,000 of mean strength.									Prevailing diseases (exclusive of venereal diseases, etc.).
		All causes.					Exclusive of venereal diseases, alcoholism, and injuries.			
		Admissions.			Noneffective.					
	Mean strength.	Total.	Hospital.	Deaths.[a]	Total.	Hospital.	Admissions.	Deaths.	Noneffective.	
Jan.....	4,392	111.57	68.31	0.23	44.05	34.01	70.58	0.23	27.29	Typhoid fever, 24; acute abscesses, 19; diarrhea and enteritis, 18; furuncles, 16; acute bronchitis, 15; tonsillitis, 15.
Feb.....	4,304	85.50	60.41	.90	41.16	32.82	53.44	.68	26.05	Furuncles, 15; dyspepsia, 14; constipation, 11; tonsillitis, 11; acute bronchitis, 9; undetermined fevers, 9.
Mar.....	4,640	95.47	63.15	.89	33.13	26.65	58.19	.44	20.10	Diarrhea and enteritis, 24; dyspepsia, 22; furuncles, 18; malarial fever, 15; mumps, 12; acute abscesses, 11.
Apr.....	5,114	97.58	64.14	.41	37.00	29.33	64.14	.....	21.26	Diarrhea and enteritis, 39; dyspepsia, 32; furuncles, 24; acute bronchitis, 19.
May.....	4,867	112.39	84.24	.....	40.48	34.01	64.93	.....	23.09	Diarrhea and enteritis, 37; dyspepsia, 29; constipation, 26; acute abscesses, 26; furuncles, 21.
June....	4,912	97.31	71.46	.41	37.30	31.20	56.19	.41	20.52	Diarrhea and enteritis, 31; furuncles, 24; acute abscesses, 18; undetermined fevers, 18; constipation, 14; dyspepsia, 13.
July.....	4,613	109.47	79.12	.42	39.66	33.60	68.07	.42	22.66	Diarrhea and enteritis, 45; furuncles, 22; acute abscesses, 21; dyspepsia, 18.
Aug.....	4,607	127.63	75.97	.63	42.89	33.51	63.82	.21	23.97	Furuncles, 30; acute abscesses, 27; diarrhea and enteritis, 22; undetermined fevers, 19; constipation, 15.
Sept....	4,573	106.49	80.91	.....	39.45	33.54	61.88	.....	22.17	Furuncles, 24; malarial fever, 22; acute abscesses, 18; acute bronchitis, 17; dyspepsia, 17; diarrhea and enteritis, 16.
Oct.....	4,644	91.30	63.52	.62	34.69	29.39	55.99	.21	20.02	Malarial fever, 35; furuncles, 22; acute abscesses, 19; tonsillitis, 17.
Nov.....	4,846	78.42	58.19	.....	33.52	28.97	42.92	.....	18.01	Malarial fever, 23; acute abscesses, 20; furuncles, 14.
Dec.....	4,813	89.76	71.06	.20	32.94	29.10	46.96	.....	17.94	Malarial fever, 28; furuncles, 24; acute abscesses, 23; tonsillitis, 15; dyspepsia, 13.
Total..	4,694	1,201.75	840.65	4.63	38.53	31.94	706.22	2.53	22.20	Diarrhea and enteritis, 271; furuncles, 254; acute abscesses, 221; dyspepsia, 201; malarial fever, 184; tonsillitis, 129; undetermined fevers, 127; constipation, 126; acute bronchitis, 119.

[a] Ratios for deaths based on mean strength "present and absent," total, 4,752.

DISCHARGES FOR DISABILITY.

As shown above under the general heading of discharges for disability, this whole question was reviewed for the army of Cuban pacification by an investigation into the discharges from that army, the rate for which slightly exceeded that for the army as a whole. The principal causes of discharge were:

TABLE NO. 39.—*Discharges for disability, year 1908, troops serving in Cuba.*

Cause of discharge.	Number discharged.	Percentage of total discharges.	Discharges for disability.				
			In line of duty.	Not in line of duty.		Discharged for disability before assignment.	
				Contracted before enlistment.	Contracted after enlistment.	In line of duty.	Not in line of duty.
DISEASES.							
General diseases	48	48.48	12	9	27	.....	.....
Venereal diseases	22	22.22	.....	3	19	.....	.....
Syphilis (secondary, 9; tertiary, 3)	12	12.12	.....	3	9	.....	.....
Gonorrhea (rheumatism, 5; chronic gonorrhea, 2; ophthalmia, 2; cystitis, 1)	10	10.10	.....	.....	10	.....	.....
Tuberculosis (of the lungs, 10; of other organs, 1)	11	11.11	10	1	.....	.....	.....
Chronic alcoholism	7	7.07	.....	3	4	.....	.....
Drug habit (cocainism, 4; morphinism, 1)	5	5.05	.....	1	4	.....	.....
Chronic amebic dysentery	1	1.01	1	.....	.....	.....	.....
Cerebrospinal meningitis	1	1.01	1	.....	.....	.....	.....
Exophthalmic goiter	1	1.01	.....	1	.....	.....	.....
Diseases of the nervous system	18	18.18	3	12	3	.....	.....
Insanity	9	9.09	3	3	3	.....	.....
Epilepsy	5	5.05	.....	5	.....	.....	.....
Neurasthenia	2	2.02	.....	2	.....	.....	.....
Hypochondriasis sexualis	1	1.01	.....	1	.....	.....	.....
Hysteria	1	1.01	.....	1	.....	.....	.....
Congenital malformation and arrested development	13	13.13	.....	13	.....	.....	.....
Diseases of the digestive system	5	5.05	3	1	1	.....	.....
Hernia (inguinal)	3	3.03	2	1	.....	.....	.....
Chronic gastritis	1	1.01	.....	.....	1	.....	.....
Appendicitis	1	1.01	1	.....	.....	.....	.....
Diseases of the genito-urinary system	4	4.04	1	3	.....	.....	.....
Chronic Bright's disease	1	1.01	1	.....	.....	.....	.....
Pyelitis	1	1.01	.....	1	.....	.....	.....
Enuresis	1	1.01	.....	1	.....	.....	.....
Chronic orchitis	1	1.01	.....	1	.....	.....	.....
Diseases of the circulatory system	4	4.04	3	1	.....	.....	.....
Organic diseases of the heart	4	4.04	3	1	.....	.....	.....
Diseases of the respiratory system	3	3.03	2	1	.....	.....	.....
Asthma	2	2.02	2	.....	.....	.....	.....
Goiter	1	1.01	.....	1	.....	.....	.....
Diseases of the locomotor system	2	2.02	1	1	.....	.....	.....
Chronic arthritis	1	1.01	1	.....	.....	.....	.....
Chronic synovitis	1	1.01	.....	1	.....	.....	.....
Diseases of the organs of special sense	1	1.01	1	.....	.....	.....	.....
Keratitis	1	1.01	1	.....	.....	.....	.....
Diseases of the skin	1	1.01	.....	1	.....	.....	.....
Chronic dermatitis	1	1.01	.....	1	.....	.....	.....
Total	99	97.06	26	42	31	.....	.....
EXTERNAL CAUSES.							
Gunshot wounds	2	66.66	2	.....	.....	.....	.....
Punctured wounds	1	33.33	1	.....	.....	.....	.....
Total	3	2.94	3	.....	.....	.....	.....
Grand total	102	1,000.00	29	42	31	.....	.....

SANITATION.

The sanitary condition of the numerous garrisons scattered over the island of Cuba was excellent, although the locations of these were determined by political reasons rather than those of sanitary convenience.

The chief surgeon in his final report remarks:

The sanitary condition of the various posts and stations occupied by this army was, with a few minor exceptions, of a temporary nature, excellent, and no disease attributable to sanitary deficiencies of any kind has been reported.

In concluding his remarks he adds:

In concluding this final report of the work of the medical department of the army of Cuban pacification, it might be well to note that it was composed wholly, as far as its officers were concerned, of commissioned members of the Medical Corps, United States Army, which, I believe, is the first time in our military history where so considerable a body of troops, either for home or foreign service, has been so officered. That this was a wise measure is, I believe, borne out by the results attained, and I am convinced that the same results, at least in a relative way, could be attained by a like body of trained men anywhere or under any conditions, providing they were given the same earnest and thoughtful support which has been accorded the medical department of this army.

In addition to the strictly military duty performed by the medical officers of this army, there were five officers of the corps detailed from it for duty with the civil government, who were engaged in important sanitary work throughout the island under the supervision of Maj. J. R. Kean, Medical Corps, U. S. Army, who was detailed by the War Department, and who, as adviser to the sanitary department of Cuba, was charged with the supervision of all civil sanitary matters on the island.

The commanding general, Maj. Gen. Thomas H. Barry, makes the following comments with reference to the sanitary administration of this army:

Credit for the excellent medical and sanitary conditions that characterized the occupation of Cuba by United States troops from October 6, 1906, to April 1, 1909, is primarily due to the intelligence and efficiency of the officers and enlisted men of the Medical Department, United States Army, who served in Cuba, either with the army or with the provisional government, especially to the efficient chief surgeon, who, in that capacity and also in his former capacity as medical inspector, proved himself a substantial prop on whom any commanding general might lean with absolute security in all matters medical and sanitary.

PORTO RICO.

The mean enlisted strength of the native Porto Rican troops was the same as last year, 564, no change having been made in the garrison.

The following table shows the movement of sick for the year 1908 as compared with that for 1907:

TABLE No. 40.

	Years.	From all causes.		Excluding injuries, venereal diseases, and alcoholism.	
		Total.	In hospital.	Total.	In hospital.
Ratio per 1,000 of mean strength:					
Admissions to sick report	1908	1,242.91	1,102.84	918.44	.....
	1907	1,207.45	1,072.70	886.52	.....
Discharges on surgeon's certificate of disability	1908	7.09	.....	7.09	.....
	1907	7.09	.....	3.55	.....
Deaths	1908	7.09	.....	5.32	.....
	1907	14.18	.....	12.41	.....
Total losses	1908	14.18	.....	12.41	.....
	1907	21.27	.....	15.96	.....
Noneffective from sickness	1908	37.02	34.40	22.78	20.73
	1907	42.38	39.88	26.85	25.46
Average number of days lost:					
For each soldier	1908	13.55	12.59	8.34	7.59
	1907	15.47	14.55	9.80	9.29
For each case	1908	10.90	11.42	9.08	.....
	1907	12.81	12.05	11.05	.....

The admission rate was slightly higher, and the discharge rate exactly the same as the previous year. All the other rates were considerably lower than for any year since the statistics have been compiled separately for Porto Rican troops. The death rate ratio, 7.09, was slightly higher than for the total army, but was much lower than for the previous year, when the ratio was 14.18. The principal reduction is in typhoid fever, which caused only 1 death in 1908, and 3 deaths in the preceding year.

The rate for malarial fevers is 219.86, which is a considerable reduction over the two preceding years, but is greatly in excess of the army as a whole, which is 46.33. Venereal diseases give an admission rate of 242.91, which is in excess of the preceding year.

The following table shows the seasonal prevalence of diseases and the prevailing diseases for each month:

TABLE NO. 41.

Month.	Mean strength.	Ratio per 1,000 of mean strength.								Prevailing diseases (exclusive of venereal diseases, etc.).
		All causes.					Exclusive of venereal diseases, alcoholism, and injuries.			
		Admissions.		Noneffective.			Admissions.	Deaths.	Noneffective.	
		Total.	Hospital.	Deaths.	Total.	Hospital.				
Jan	572	85.66	78.67	.....	24.48	21.20	66.43	.....	18.10	Malaria, 4; diarrhea, 1; fevers, 1.
Feb	573	97.73	90.75	.....	31.29	30.15	82.02	.....	24.37	Malaria, 8; diarrhea, 4; fevers, 1.
Mar	569	89.63	80.84	1.76	27.78	26.76	65.03	1.76	20.13	Diarrhea, 6; malaria, 4; fevers, 2.
Apr	565	86.73	76.11	1.77	35.22	32.33	77.88	1.77	28.50	Malaria, 10; diarrhea, 4; fevers, 4.
May	570	105.26	87.72	1.75	38.03	35.31	63.16	.....	22.35	Malaria, 7; diarrhea, 4; fevers, 2.
June	555	93.69	86.49	.....	42.04	39.04	57.66	.....	17.00	Malaria, 5; diarrhea, 4.
July	545	97.25	80.73	.....	35.81	33.92	64.22	.....	16.10	Fevers, 5; diarrhea, 4; malaria, 3.
Aug	556	80.94	73.74	.....	35.10	34.00	57.55	.....	18.28	Diarrhea, 5; malaria, 3.
Sept	558	93.19	75.27	1.79	32.02	28.02	64.52	1.79	16.37	Malaria, 4; diarrhea, 2; fevers, 1.
Oct	568	86.27	73.94	.....	40.38	36.52	49.30	.....	22.26	Malaria, 2; diarrhea, 1; fevers, 1.
Nov	569	128.30	114.24	.....	46.46	41.54	100.18	.....	27.94	Malaria, 17; diarrhea, 4.
Dec	572	195.80	181.82	.....	55.15	53.57	167.83	.....	41.22	Malaria, 57.
Total	564	1,242.91	1,102.84	7.09	37.02	34.40	918.44	5.32	22.78	Malaria, 124; diarrhea, 39; fevers, 17.

The highest admission rates were in December and the lowest in August. The highest noneffective rate was also in December, and the lowest in July. The deaths were one each from typhoid fever, malarial fever, septicemia, gunshot wound (homicidal).

The following table shows the prevalence of the more important diseases among the Porto Rican troops. It is to be noted that there were no cases of pneumonia, hepatic abscess, appendicitis, or alcoholism among these troops during the year.

TABLE 42.—*Diseases of Porto Rican troops—Admission rates per 1,000 of mean strength.*

Venereal diseases	242.91
Gonorrhea and results	143.62
Chancroid and results	60.28
Syphilis and results	39.01
Malaria	219.86
Influenza	83.33
Furuncle	78.01
Dyspepsia	62.06
Dengue	44.33
Measles	19.50
Bronchitis, acute and chronic	19.50
Dysentery	15.96
Smallpox	7.09
Typhoid fever	5.32
Rheumatism, acute, articular	5.32
Filariasis	3.55
Tuberculosis, all	1.77
Insanity	1.77
Dhobie itch	1.77

RECRUITING.

Eighty per cent of the recruits examined by medical officers were accepted. This is slightly better than last year.

Forty-five per cent of the accepted candidates were between the ages of 21 to 25, inclusive; only 3 candidates being under this age. Fifty-four per cent were over 25 years.

Fifty-eight per cent were 66 inches, or under, in height, and only one reached the height of 6 feet. Eighty-five per cent of all recruits were under the average height of the American recruit, viz, 67 inches.

Fifty-seven per cent weighed less than 130 pounds and only 5 per cent weighed 150 pounds, or over.

Sixty-six per cent had a chest measurement of 33 inches, or under, and 17 per cent had chest measurements of 35 inches, or over—a considerable improvement over the previous year.

REJECTIONS.

Twenty-five per cent of the rejections were caused by deficiency in weight; 18 per cent for defects of vision, and 10 per cent each for venereal diseases, diseases of the genito-urinary system (nonvenereal), and heart disease. Alcoholism does not appear as a factor for rejections.

TABLE No. 43.—*Examination of recruits.*

	Number.	Ratio per 1,000 examined.
Examined by medical officers	450	1,000.00
Accepted	360	800.00
By first enlistment	52	115.56
By all other enlistments	308	684.44
Rejected by medical officers	88	195.56
Declined	2	4.44

TABLE No. 44.—*Occupations of recruits first enlistment year 1908, Porto Rican regiment*

Clerks	16	Machinists	1
Farmers	12	Masons	1
Barbers	3	Mechanics	1
Laborers	2	Merchants	1
Cigar makers	2	Overseers	1
Shoemakers	2	Pharmacists	1
Musicians	2	Students	1
Carpenters	1	Sailors	1
Coachmen	1	Soldiers	1
Electricians	1		
Engineers	1	Total	52

HAWAII.

The garrison of the Hawaiian Islands is situated on the island of Oahu and has been increased during the year from four companies of infantry so that a battalion of engineers were added before the end of the year and 8 companies of cavalry on January 15, 1909. The average enlisted strength during the year, however, was only 255.

All the rates have increased as compared to those of the preceding year, the total admission rate being 1,282.35, and the constantly noneffective rate 37.61, as compared with the admission rate of 1,188.03 and constantly noneffective rate of 42.68 for the whole army.

Except for the very high admission rates for venereal diseases, 239.22, and alcoholism, 74.51, the sanitary record of Hawaii would be excellent; as for diseases, exclusive of these, its admission rate is only 713.72.

There were no cases of typhoid fever, only one of dysentery, and one of tuberculosis during the year. Only two deaths occurred, one from tetanus and one from drowning.

Seven enlisted men were invalided home during the year, of whom three were subsequently returned to duty, and four discharged on surgeon's certificate of disability.

PHILIPPINE ISLANDS.

AMERICAN TROOPS.

The health of the American troops in the Philippines continues to improve year by year. As shown in Table No. 3, the admission rate for disease and the constantly noneffective rate are better for 1908 than for 1907, which in turn was better than for any preceding year. The death rate was, however, larger both for disease and external causes. The principal increase in the former was from cholera, which caused 7 deaths as against 1 for the preceding year. Among external causes wounds caused 20 deaths as against 12, and acute poisoning 11 as against 1 for 1907.

The mean strength of the American troops was 11,971, not including a force of native troops, the Philippine Scouts, with a mean strength of 5,085, whose medical statistics will be given separately later. The more important diseases showing a notable reduction are malarial fevers, dysentery, venereal diseases, and bronchitis. On the other hand, there was an increased admission rate for diarrhea and enteritis, appendicitis, and intestinal parasites. The increase in ankylostomal

infection, 77 cases as compared with 33, indicated probably only an increased care in searching for this infection.

The diseases causing the highest noneffective rates were venereal diseases, 17.97; malaria, 2.76; dysentery, 2.57; dengue, 1.80; and diarrhea and enteritis, 1.75.

The principal causes of death from diseases were (absolute numbers) tuberculosis, 12; cholera, 7; organic diseases of the heart, 5; and alcoholism, 5. It should be noted that deaths occurring in the United States from diseases originating in the Philippines are credited in this report to the station of the regiment or organization to which the soldier belongs. Thus of the 12 deaths from tuberculosis credited to the Philippines, only 2 actually occurred there, the balance being among soldiers invalided home on account of that disease. Four cases of sunstroke occurred without a death. No case of snake bite was reported. Sixteen deaths occurred from gunshot wounds and 4 from other wounds, none of them having occurred in action. There were 13 deaths from drowning.

PREVALENCE OF SPECIAL DISEASES.

TYPHOID FEVER.

The admission rate was 2.76 as compared with 3.50 for 1907, with 5 deaths as against 3 for the preceding year. This rate was less than that for the army. Nine cases occurred in the Cuartel de Espana between November 29 and December 10, in Company M, Twenty-sixth Infantry. The outbreak having been investigated by the board for the study of tropical diseases, the company cook, who gave a history of a former attack and a positive Widal reaction was believed by them to have originated the outbreak, although the bacillus of Eberth was not found in his excreta. The assistant cook was one of the last cases attacked. As the men attacked were not closely associated with each other in barracks it seems probable that contact infection was not a feature of this outbreak, but that all the cases are to be ascribed to infection of the food by the cook.

TABLE NO. 45.—*Typhoid fever, Philippine Islands.*

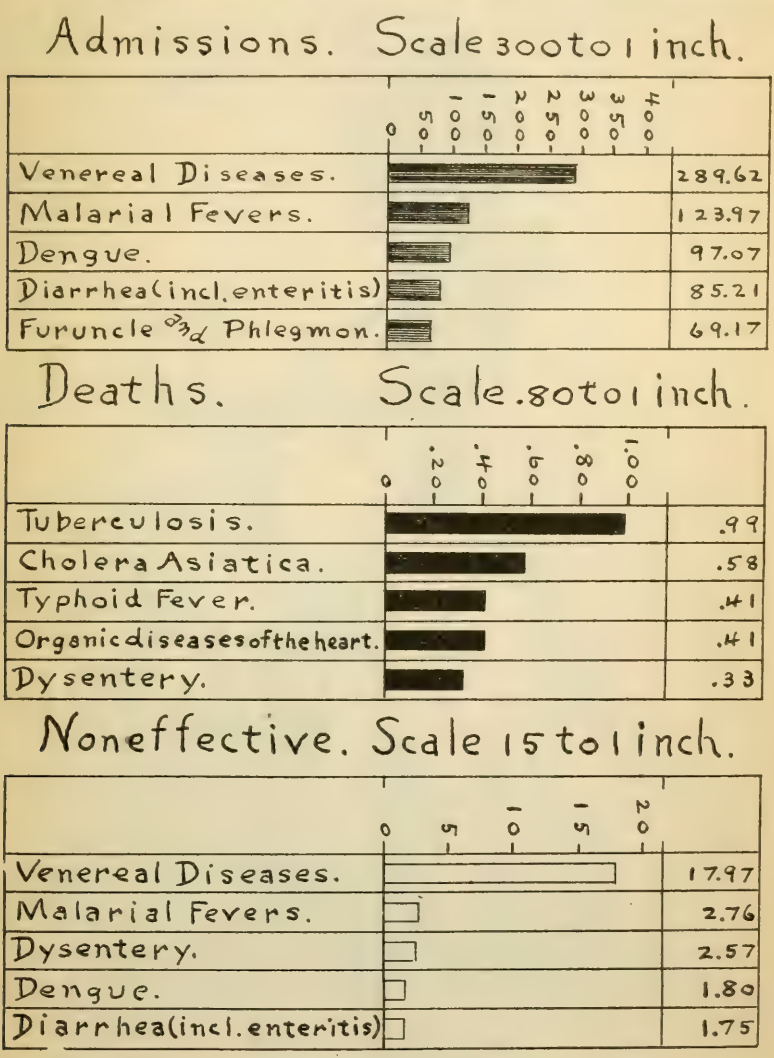
Posts.	Mean strength.	Admissions.	Deaths.
Camp Bumpus, Leyte	327	11	.....
Manila posts	988	8	.....
Fort William McKinley, Luzon	2,354	4	1
Camp Stotsenburg, Luzon	981	3	.....
Camp Downes, Leyte	281	3	.....
Iloilo, Panay	177	2	.....
Camp Keithley, Mindanao	993	1	.....
Jolo, Jolo	942	1	.....
Division hospital, Manila	.....	.....	4
Total	11,971	33	5

MALARIAL FEVER.

The admission rate for all fevers of this class was 123.97 as compared with 167.79 for 1907, 304.20 for 1906, and 261.55 for 1905. This great improvement is to be ascribed to the steps taken to protect the men at night from the bites of anopheles mosquitoes and doubtless also the measures taken to destroy their breeding places near the garrisons. In this connection the chief surgeon of the Philippines Division states in his annual report as follows:

Although every possible precaution has been observed to prevent infection, malarial diseases occupy the third place among causes of sickness, following immediately after diseases affecting the digestive system. Mosquito bars have been universally used, and recommendations were made for the screening of all buildings occupied by troops, but as yet the screens have not been installed. It is my opinion that not only to safe-

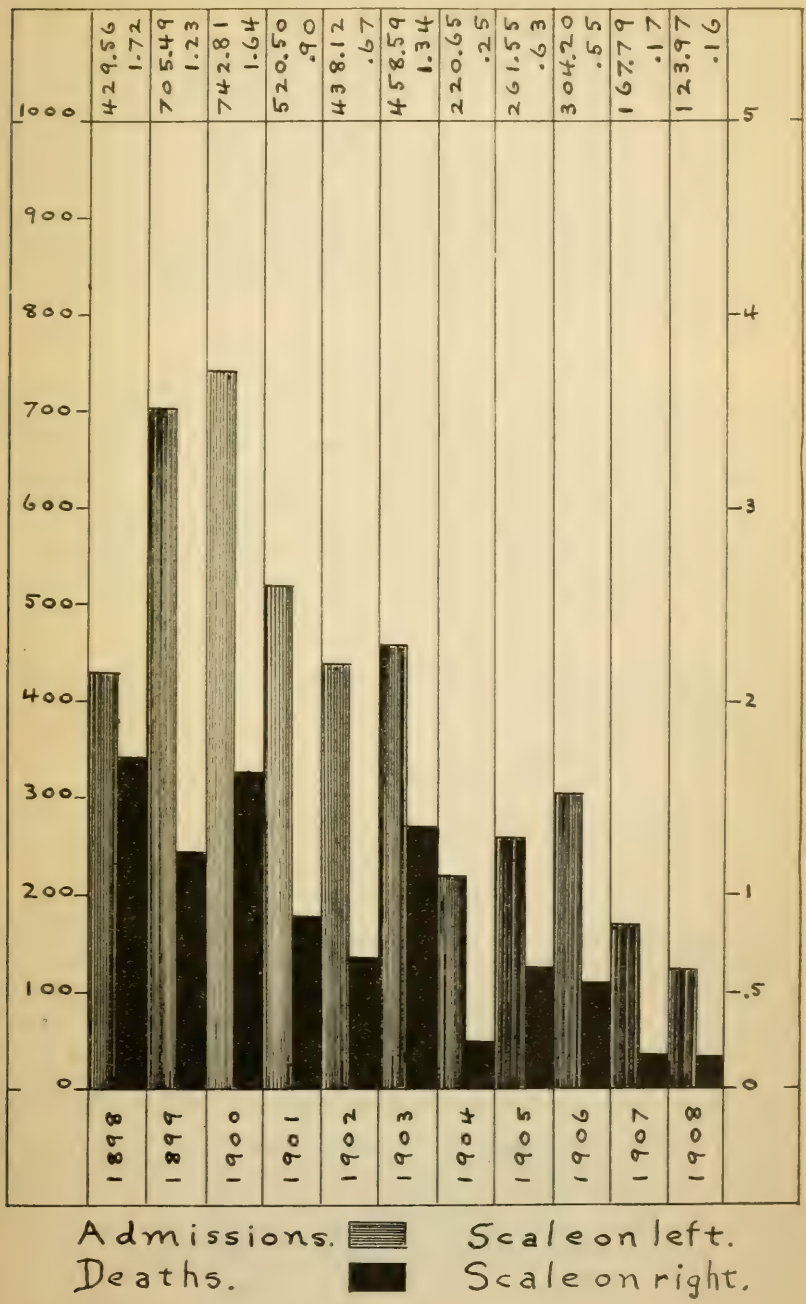
CHART Q.—*Showing the relative admission, death, and noneffective rates per thousand of mean strength for certain special diseases in the Philippine Islands (American troops).*



guard against malarial infection, but for the personal comfort of the command as well, the expenditure of the money is justifiable for screening every permanent post in the islands. The infection of the anopheles in a community adjoining military stations should be considered in this connection, through new commands suffering from malarial diseases. Many of the posts occupied by American troops in this division are constructed of lumber and, with slight alterations, could be arranged for screening. Many of the smaller posts occupied by native troops in the pueblos could also be screened. It is my opinion that a large number of the command, both Americans

MILITARY DEPARTMENTS
AMERICAN TROOPS
PHILIPPINE ISLANDS
ADMISSION RATE
FOR
DISEASE.
1000 to 1099
1200 to 1299
DEPARTMENT OF LUZON.
DEPARTMENT OF MINDANAO

CHART R.—*Showing the relative admission and death rates per thousand of mean strength for malarial diseases in the Philippine Islands (American troops), by years, 1898–1908.*



and natives, suffer from latent malaria in the Philippine Islands, and only exhibit active symptoms of the disease when called upon to perform unusual duty, such as campaigning or severe fatigue labor. This was exemplified at Fort William McKinley, during the last calendar year, during the employment of the Twenty-ninth Infantry in digging ditches in the hot sun for several days, resulting in the sickness of a large number of the men. Upon examination of their blood a large percentage of them were found to contain malaria parasites.

The chief surgeon of the Department of Mindanao observes as follows: "Apart from admissions due to external causes, the highest admission rate during the year was caused by malaria, and of a total of 884 cases the post of Jolo had 428 cases. The insanitary condition of the town of Jolo was responsible for this large number of cases, and in June, 1908, arrangements were made with the municipal authorities by which a sanitary squad was organized under the supervision of a medical officer. This squad commenced work in July, cleaning the city and doing away with mosquito-breeding places, and the efficiency of its work is shown by a progressive decrease in the number of cases of malaria admitted, which from the maximum of 68 in the month of April fell to the minimum of 7 in the month of November."

"Rules requiring men to sleep under mosquito bars are rigidly carried out in the department, and the question of drainage and the filling in of mosquito-breeding places is receiving appropriate attention."

UNDETERMINED FEVERS.

The admission rate for these fevers was 25.31, as compared with 15.73 for last year. This increase, taken together with the fact that out of 1,484 admissions for malarial fever only 3 were reported as of undetermined type, shows the increasing care taken by medical officers to make accurate diagnoses of the malarial fevers and to exclude from that heading all which can not be scientifically demonstrated to be such. The various diagnoses under this head are as follows:

Febricula	173
Simple continued fever, cause unknown	43
Fever, type undetermined	25
Ephemeral fever	48
Thermic fever	9
Continued fever, type undetermined	5
Total	303

CHOLERA.

These statistics are for enlisted men only, and consequently do not include the case of an officer who died at Camp Gregg, having become infected while on survey duty in the country.

Thirteen cases of cholera and 7 deaths occurred among American troops stationed in the Philippines. The chief surgeon in his annual report remarks in this connection:

> Considering the serious epidemic which raged during the past season, this record speaks well for the sanitary precautions taken to prevent the spread of the contagion.

Cholera appeared during the present calendar year all over the archipelago, especially in the islands of Panay and Mindanao. Religious superstition and general ignorance to a great extent prevent the natives from reporting infectious diseases, such as bubonic plague, smallpox, and cholera, to the health authorities.

DYSENTERY.

The occurrence of this disease shows a diminution as compared with the year before, the admission rate being 26.23 as compared with 42.23 for the year 1907. The proportion of amebic to bacillary infection was 3.31 to 1, as compared with 17 to 1 for the preceding year. The actual number of cases of amebic infection was 149, as compared with 369 for the preceding year, a diminution in this formidable infection which is most gratifying.

DENGUE.

There were 1,162 admissions for dengue, as compared with 738 for the preceding year. As this disease caused no deaths and had a very small constantly noneffective rate, it constitutes rather an inconvenience than a sanitary danger.

BERIBERI.

One case of beriberi occurred in a white soldier during the year and no deaths. The immunity of American troops, both white and colored, to this infection, which is so formidable among the native troops, is a most interesting phenomenon. Its occurrence among the Filipino Scouts is discussed below.

YAWS.

There was one case of yaws in the person of a white soldier and no death.

TUBERCULOSIS.

The admission rate for all forms of tuberculosis was 6.18, being somewhat less than the preceding year, but about the average of the two preceding years.

VENEREAL DISEASES.

The admission rate, though very high, was considerably less than for the preceding year, being 289.62, as compared with 311.22 for 1907.

ALCOHOLISM.

The admission rate for alcoholism was 25.31, somewhat less than for the preceding year, which had a ratio of 29.23. The number of deaths, however, was 5, as compared with 1 for 1907. These figures do not include the loss of life caused by the distressing accident which occurred at Camp Keithley, Mindanao, whereby 28 men were poisoned with methyl alcohol, of whom 11 died. The following is the chief surgeon's report:

I have the honor to make the following special report concerning 28 cases of acute methyl alcoholism which recently occurred at this post:

The first case reported from the guardhouse about 9 a. m., the 15th inst., and it was soon learned that a celebration had taken place the previous night in M and L companies, with "Columbian spirits" as the exhilarator. The "Columbian spirits" was purchased from the post exchange on the afternoon of the 14th under various excuses and was mixed in a dish pan with milk and sugar. About 10 bottles are believed to have been purchased and consumed, in various quantities, by those admitted to sick report.

Immediately after the admission of the first case representation of the facts was made to the commanding officer, and company commanders were ordered by him to

make immediate inspection of barracks and send all suspicious cases to hospital. This procedure ultimately resulted in producing the 28 cases on sick report and 4 light ones who reported that they had taken only a small quantity and who showed no symptoms of alcoholism. They were given a purgative and marked "duty."

Private D., the first case reported, was on special duty away from the observation of his company commander and had been drinking ordinary alcoholic beverages for some days. He claims to have taken about 1,500 c. c. of the wood-alcohol punch and then lost count of the additional quantity. This man is still alive and bids fair to recover, though he will probably lose his eyesight.

Several of the men who have died claimed to have taken only one drink of the punch.

All patients walked to the hospital and when examined a few of them complained of being "very sick," but most of them regarded the admissions to sick report rather in the light of a joke. When admitted, a few of them showed a considerable depression of circulation. All showed conjunctival congestion and all were more or less unsteady in locomotion.

Upon admission, each man was put to bed, given a drink of whisky, 50 c. c. magnesium sulphate, an enema, and strychnia stimulation was pushed to the limit. Hypodermoclysis of normal saline solution with adrenalin chloride was tried on four cases who subsequently died. Hot bottles and blankets were used to conserve heat, but as the cases progressed extreme restlessness developed and it took two men to keep one patient even partially covered.

In all cases the first serious symptoms were increased force and frequency of respiration, until respiration was costal as well as diaphragmatic and all the accessory muscles were in use. This respiratory disturbance was accompanied and followed by extreme restlessness and distress; then unconsciousness with bellowing expiration; then, in most cases, convulsion with cessation of bellowing expiration, supervention of coma, sterterous respiration, gradually slowing until cessation. In all fatal cases the pupil was widely dilated and without reaction and apparent blindness was present.

In most cases the heart's action became feeble and rapid about the time the disturbance of respiration commenced, but continued until the last gasp for breath. In one case the heart's action remained good until the convulsion occurred.

Gastric irritation was present to a slight degree in all except one case and in that (patient still alive) it was a prominent symptom, but this man had drunk "Columbian spirits" undiluted.

There seems to be practically no intestinal irritation.

Four men died within twenty-four hours and several more within forty-eight hours. Eleven deaths in all occurred within forty-eight hours. The other cases appear to be recovering. A further report will be made upon the ultimate result of the cases now in the hospital.

Commenting upon this, the chief surgeon of the department remarks:

This occurrence is an argument in itself for the restoration of the beer and light-wine features of the post exchange. It is believed that had these unfortunate men been accorded the privileges of ordinary citizens and allowed to purchase beer at the post, which is isolated, their lives would not have been sacrificed in this manner.

INSANITY.

The admission rate for insanity was 1.09, as compared with 1.88 for 1907 and 2.02 for 1906.

DIARRHEA AND ENTERITIS.

The admission rate for these diseases was 85.21, an increase over the preceding year, when the rate was 72.43, but better than the year 1906, when the rate was 130.69.

INFLUENCE OF STATION.

The Department of Luzon had the highest admission rate and the Department of Mindanao had the lowest. For deaths, the Department of Mindanao had the highest rate and Visayas the lowest. For total noneffective rate from sickness, Visayas had the highest rate and Luzon the lowest.

TABLE NO. 46.—*Movement of sick, American troops in the Philippines.*

Department and island.	Mean strength.	Ratios per 1,000 of mean strength.												Average number of days lost.			
		Admissions to sick report.		Discharges on surgeon's certificate of disability.		Deaths.		Total losses.		Noneffective from sickness.							
										From all causes.		Excluding injuries, venereal diseases, and alcoholism.		From all causes.		Excluding injuries, venereal diseases, and alcoholism.	
		From all causes.	Excluding injuries, venereal diseases, and alcoholism.	From all causes.	Excluding injuries, venereal diseases, and alcoholism.	From all causes.	Excluding injuries, venereal diseases, and alcoholism.	From all causes.	Excluding injuries, venereal diseases, and alcoholism.	Total.	In hospital.	Total.	In hospital.	For each soldier.	For each case.	For each soldier.	For each case.
Department of Luzon.....	5,983	1,552.23	975.43	9.86	7.35	8.52	3.34	18.38	10.69	42.95	35.22	23.83	19.90	15.72	10.13	8.72	8.94
Department of Visayas...	2,107	1,459.42	809.21	9.49	8.07	6.64	3.32	16.13	11.39	60.88	56.28	28.29	25.99	22.28	15.27	10.35	12.80
Samar Island	266	943.61	657.89	26.32	22.56			26.32	22.56	41.14	38.67	20.57	18.97	15.06	15.96	7.33	11.45
Leyte Island.....	615	1,424.39	795.12	9.76	8.13	3.25	1.63	13.01	9.76	49.58	40.14	21.94	17.12	18.14	12.74	8.63	10.10
Guimaras Island....	762	1,755.91	956.69	6.56	6.56	14.43	7.87	20.99	14.43	86.03	83.37	41.35	40.34	31.49	17.93	15.13	15.82
Cebu Island ..	287	1,470.38	825.78	6.97	3.48			6.97	3.48	48.72	45.72	23.71	21.66	17.83	12.13	8.08	10.51
Panay Island.	177	1,062.15	423.73			5.65		5.65		41.29	39.36	13.15	12.53	15.14	14.22	4.81	14.36
Department of Mindanao.	3,753	1,228.08	779.64	6.39	4.53	9.33	3.73	15.72	8.26	43.89	39.75	22.29	20.24	16.06	13.08	8.16	10.46
Mindanao Island .	2,811	1,225.90	747.42	6.76	5.69	12.10	4.98	18.86	10.67	42.91	37.72	22.30	19.72	15.70	12.81	8.76	10.92
Jolo Island.....	942	1,234.61	875.80	5.31	1.06	1.06		6.37	1.06	46.81	45.81	22.25	21.79	17.13	13.88	8.14	9.30
Total	11,971	1,439.65	890.90	8.65	6.59	9.31	4.37	17.96	10.96	53.35	47.33	28.43	25.39	19.53	13.56	10.41	11.68

INFLUENCE OF SEASON.

Exclusive of injuries, venereal diseases, and alcoholism, which are not influenced by season, the highest admission and noneffective rates occurred in February and the lowest in December. The highest death rate occurred in July and the lowest in April and October, which showed an equal rate.

TABLE NO. 47—*Influence of season.*

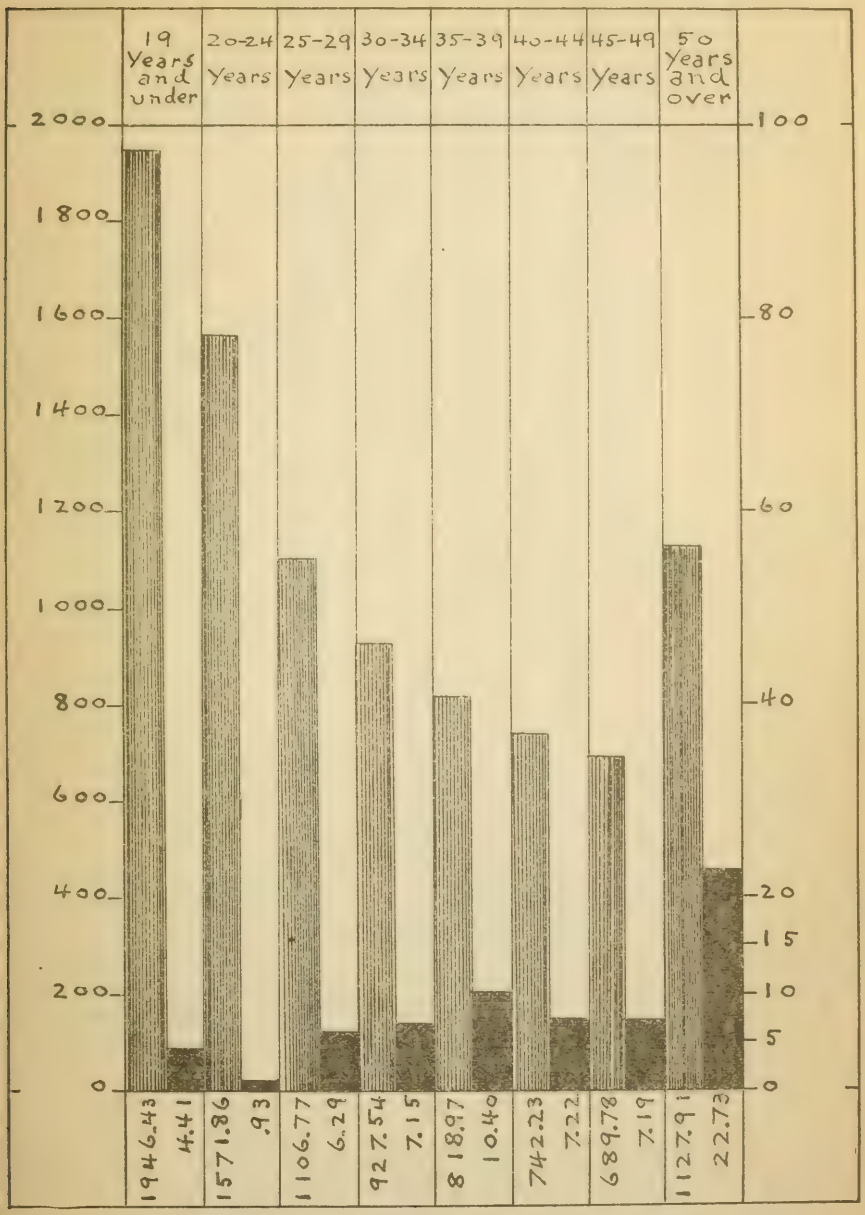
Ratio per 1,000 of mean strength.

Month.	Mean strength.	All causes.					Exclusive of venereal diseases, alcoholism, and injuries.			Prevailing diseases (exclusive of venereal diseases, etc.).
		Admissions.			Noneffective.					
		Total.	Hospital.	Deaths.	Total.	Hospital.	Admissions.	Deaths.	Noneffective.	
Jan.....	12,287	126.80	101.90	0.76	54.13	49.45	79.84	0.42	28.88	Malaria 168; dengue, 124; diarrhea and enteritis, 66; furuncle, 41.
Feb.....	11,441	131.02	105.32	.42	62.64	56.31	82.95	.25	34.12	Malaria, 140; dengue, 140; diarrhea and enteritis, 85; acute bronchitis, 43; furuncle, 40.
Mar.....	11,972	129.89	104.49	.88	57.24	51.53	82.44	.32	31.45	Malaria, 159; dengue, 158; diarrhea and enteritis, 52; acute bronchitis, 40.
Apr.....	12,495	111.32	92.52	.56	54.52	49.66	68.43	.16	29.59	Malaria, 155; dengue, 82; diarrhea and enteritis, 67; furuncle, 38.
May.....	11,983	109.32	85.62	1.09	48.08	42.69	70.18	.34	25.55	Malaria, 144; diarrhea and enteritis, 71; dyspepsia, 53; furuncle, 50; dengue, 48.
June....	11,875	129.85	102.65	.67	50.94	43.97	81.35	.25	26.37	Diarrhea and enteritis, 160; malaria, 141; dengue, 66; dyspepsia, 61.
July.....	11,807	126.37	99.69	.66	55.84	48.95	75.72	.66	27.79	Diarrhea and enteritis, 141; malaria, 117; dengue, 53; dyspepsia, 51.
Aug.....	11,802	124.81	99.31	.75	56.96	50.34	76.68	.58	30.22	Malaria, 119; diarrhea and enteritis, 100; dengue, 65; furuncle, 59; dyspepsia, 50.
Sept....	11,812	112.68	82.80	.67	54.77	47.53	67.14	.50	29.08	Malaria, 94; diarrhea and enteritis, 70; dengue, 53; furuncle, 50.
Oct.....	11,843	124.38	97.10	.57	50.83	44.93	75.23	.16	26.50	Dengue, 96; diarrhea and enteritis, 93; malaria, 91; dyspepsia, 57.
Nov.....	11,896	120.12	94.06	.66	50.56	43.64	73.05	.25	26.90	Dengue, 204; malaria, 69; diarrhea and enteritis, 53; furuncle, 49.
Dec.....	12,439	94.94	78.14	1.60	44.75	39.79	59.01	.48	25.26	Malaria, 87; dengue, 73; diarrhea and enteritis, 62; furuncle, 38.
Total.	11,971	1,439.65	1,142.51	9.31	53.35	47.33	890.90	4.37	28.43	Malarial fevers, 1,484; dengue, 1,162; diarrhea and enteritis, 1,020; furuncle, 525; dyspepsia, 492.

INFLUENCE OF AGE.

The highest admission, discharge, and noneffective rates and lowest death rates were noted in soldiers under 25 years of age, while the highest death and lowest admission, discharge, and noneffective rates occurred in those 45 years of age and over.

CHART 8.—*Showing by ages the relative admission and death ratios for disease per thousand of mean strength in the Philippine Islands (American troops).*



LENGTH OF SERVICE.

The highest admission and noneffective rates occurred in the first year of service, the next highest in the second year, and the lowest in those having ten years or more of service.

The highest discharge rate occurred in the second year and the lowest in those having ten or more years of service. The highest death rate occurred among those having ten or more years of service and the lowest in the third year of service.

TABLE No. 48.—*Influence of age and length of service.*

Length of service.	Mean strength.	Admitted.	Discharged on surgeon's certificate of disability.	Died.	Constantly non-effective.	Ratio per 1,000 of mean strength.			
						Admitted.	Discharged on surgeon's certificate of disability.	Died.	Constantly non-effective.
Under 1 year	1,948	3,826	21	6	145.83	1,964.07	10.63	3.04	74.86
1 to 2 years	2,308	3,176	28	7	117.84	1,376.08	11.97	2.99	51.06
2 to 3 years	1,519	1,489	10	2	58.05	980.25	6.49	1.30	38.22
3 to 4 years	1,134	1,226	4	10	47.79	1,081.13	3.48	8.70	42.14
4 to 5 years	818	858	2	2	34.25	1,048.90	2.41	2.41	41.87
5 to 10 years	2,627	2,542	15	16	104.15	967.64	5.63	6.01	39.65
10 years and over	1,617	1,342	3	18	52.28	829.93	1.83	10.98	32.33
Total	11,971	14,459	83	61	560.20	1,207.84	6.84	5.03	46.80

Age.	Mean strength.	Admitted.	Discharged on surgeon's certificate of disability.	Died.	Constantly non-effective.	Ratio per 1,000 of mean strength.			
						Admitted.	Discharged on surgeon's certificate of disability.	Died.	Constantly non-effective.
19 years and under	224	436	1	1	14.12	1,946.43	4.41	4.41	63.02
20 to 24 years	4,258	6,693	39	4	250.83	1,571.86	9.04	.93	58.91
25 to 29 years	3,606	3,991	25	23	156.23	1,106.77	6.84	6.29	43.33
30 to 34 years	1,932	1,792	11	14	73.60	927.54	5.62	7.15	38.10
35 to 39 years	1,044	855	4	11	32.65	818.97	3.78	10.40	31.27
40 to 44 years	547	406	2	4	20.97	742.23	3.61	7.22	38.36
45 to 49 years	274	189	1	2	7.86	689.78	3.60	7.19	28.70
50 years and over	86	97	.....	2	3.92	1,127.91	.....	22.73	45.56
Total	11,971	14,459	83	61	560.20	1,207.84	6.84	5.03	46.80

TABLE NO. 49.—*Discharges for disability, American troops in the Philippine Islands.*

Cause of discharge.	Number of discharges.	Percentage of total discharges.	Discharges for disability.				
			In line of duty.	Not in line of duty.		Discharges for disability before assignment.	
				Contracted before enlistment.	Contracted after enlistment.	In line of duty.	Not in line of duty.
DISEASES.							
General diseases	35	33.33	28	3	4		
Tuberculosis (all pulmonary)	23	21.90	23				
Venereal diseases—syphilis (secondary, 2; tertiary, 1)	3	2.86			3		
Drug habit (cocainism, 2; opium, 1)	3	2.86		2	1		
Dysentery, amebic chronic	2	1.90	2				
Sarcoma	1	.95	1				
Articular rheumatism	1	.95	1				
Exophthalmic goiter	1	.95	1				
Chronic lead poisoning	1	.95		1			
Diseases of the nervous system	13	12.38	6	7			
Insanity	4	3.81	3	1			
Epilepsy	3	2.86	2	1			
Sclerosis of the spinal cord	2	1.90		2			
Paralysis without specified cause	1	.95	1				
Chorea	1	.95		1			
Neurasthenia, chronic	1	.95		1			
Hysteria, chronic	1	.95		1			
Diseases of the organs of special sense	9	8.57	9				
Other diseases of the eye (pan ophthalmia, 1; atrophy of the optic nerve, 1; chronic hyalitis, 1; macula disease, 1; permanent opacities of vitreous humor, 1)	5	4.76	5				
Astigmatism	1	.95	1				
Keratitis	1	.95	1				
Disease of the choroid	1	.95	1				
Chronic otitis media	1	.95	1				
Congenital malformations and arrested development	9	8.57		9			
Diseases of the circulatory system	5	4.76		5			
Irritable heart	4	3.81		4			
Chronic endocarditis	1	.95		1			
Diseases of the organs of locomotion	4	3.81	1	3			
Bunions	2	1.90		2			
Osteomylitis	1	.95		1			
Chronic arthritis	1	.95	1				
Diseases of the respiratory system	3	2.86		3			
Chronic asthma	2	1.90		2			
Goiter	1	.95		1			
Diseases of the digestive system	2	1.90	2				
Chronic gastritis	1	.95	1				
Ventral hernia	1	.95	1				
Diseases of the genito-urinary system	2	1.90		2			
Enurisis	2	1.90		2			
Diseases of the skin and cellular tissue	1	.95		1			
Chronic ulcers	1	.95		1			
Total	83	79.05	46	33	4		
EXTERNAL CAUSES.							
Fractures (not gunshot) (bones, of arms 5, of legs 4)	9	8.57	6		3		
Gunshot wounds	6	5.71	3		3		
Dislocations	2	1.90	2				
Sprain	1	.95	1				
Contusion (atrophy of muscles following)	1	.95	1				
Incised wound	1	.95	1				
Lacerated wound	1	.95			1		
Secondary result of injury	1	.95		1			
Total	22	20.95	14	1	7		
Total for disease and external causes	105	1,000.00	60	34	11		

TABLE NO. 50.—*Enlisted men invalided home from the Philippine Islands.*

Cause.	Number of cases.	Percentage of total cases.	Duty.	Discharged on surgeon's certificate of disability.	Died.	Otherwise disposed of.	Remaining at end of year.
Tuberculosis	69	25.37	2	5	12	1	49
Dysentery	21	7.72	9	1	1	3	7
Insanity	17	6.25	2	5		1	9
Venereal diseases	9	3.31	3	1		1	4
Sprue	9	3.31	5			1	3
Fractures (other than skull)	9	3.31		8			1
Congenital malformations and arrested development	8	2.94	1	7			
Melancholia	8	2.94	2			2	4
Diseases of the middle and internal ear	6	2.21	1	1	[a]1		3
Organic diseases of the heart	6	2.21	1	1	1	1	2
Secondary results of injury	6	2.21	2	1		1	2
Functional diseases of the heart	5	1.84		4			1
Epilepsy	5	1.84	1	2		1	1
Gunshot wounds	5	1.84		4			1
Chorea	4	1.47	2	1			1
Enteritis	4	1.47				1	3
Neurasthenia	4	1.47	2	2			
Narcotic poisoning, chronic	3	1.10	2	1			
Diseases of the nervous system, not mentioned in detail	3	1.10	2	1			
Diseases of the eye and its adnexa, not mentioned in detail	3	1.10	1	2			
Hernia	3	1.10	2	1			
Pleurisy	3	1.10	1				2
Asthma	3	1.10	1	2			
Articular rheumatism	3	1.10		1		1	1
Diseases of the spinal cord, not mentioned in detail	2	.74		2			
Neuritis	2	.74	1				1
Filariasis, not mentioned in detail	2	.74	2				
Chronic bronchitis	2	.74	2				
Gastritis	2	.74	2				
Cirrhosis of the liver	2	.74					2
Hepatic abscess	2	.74					2
Chronic nephritis	2	.74			2		
Diseases of the bladder	2	.74		2			
Ulcer	2	.74	1	1			
Bunion	2	.74		2			
Debility following operation and disease	2	.74	1				1
Dislocations	2	.74		2			
Malarial fever	1	.37	1				
Erysipelas	1	.37					1
Purulent infection and septicemia	1	.37	1				
Cancer and other malignant tumors of the peritoneum, intestines, and rectum	1	.37			1		
Cancer and other malignant tumors of other organs and unspecified	1	.37		1			
Exophthalmic goiter	1	.37		1			
Chronic alcoholism	1	.37	1				
Chronic lead poisoning	1	.37		1			
Chronic poisoning, not mentioned in detail	1	.37		1			
Cerebral congestion and hemorrhage	1	.37					1
Paralysis without specified cause	1	.37		1			
General paralysis	1	.37					1
Neuralgia	1	.37		1			
Keratitis	1	.37		1			
Choroid, diseases of	1	.37		1			
Rectal bilharzion	1	.37	1				
Chronic nasal catarrh	1	.37	1				
Diseases of the thyroid body	1	.37		1			
Diseases of the respiratory system, not mentioned in detail	1	.37	1				
Ulcer of the stomach	1	.37					1
Dyspepsia	1	.37					1
Biliary calculi	1	.37					1
Appendicitis and abscesses of the iliac fossæ	1	.37	1				
Osteomyelitis	1	.37		1			
Periostitis	1	.37	1				
Arthritis	1	.37		1			
Fracture of the spinal column	1	.37			1		
Sprain	1	.37		1			
Contusion	1	.37		1			
Incised wound	1	.37		1			
Total cases	272		59	74	19	14	106
Percentage of total dispositions		100.00	21.69	27.21	6.99	5.15	38.97

[a] Died of Asiatic cholera on the third day out from Manila.

TABLE NO. 51.—*Causes of death, American troops, Philippine Islands.*

Cause of death.	Number	Ratio per 1,000 of mean strength.	Ratio per 1,000 of total deaths.
DISEASES.			
Tuberculosis (pulmonary, 11; miliary, 1)	12	0.99	196.72
Cholera Asiatica	7	.58	114.75
Alcoholism (acute, 2; chronic, 2; delirium tremens, 1)	5	.41	81.97
Organic diseases of the heart	5	.41	81.97
Typhoid fever	5	.41	81.97
Dysentery (amebic, 2; bacillary, 2)	4	.33	65.58
Syphilis (secondary, 2; tertiary, 1)	3	.25	49.18
Cancer	3	.25	49.18
Malaria fever (malignant remittent, 1; pernicious, 1)	2	.16	32.79
Aneurism	2	.16	32.79
Pneumonia	2	.16	32.79
Sprue	2	.16	32.79
Nephritis (acute, 1; chronic, 1)	2	.16	32.79
Erysipelas	1	.08	16.39
Tumor	1	.08	16.39
Diabetes	1	.08	16.39
Apoplexy	1	.08	16.39
Gastro-enteritis	1	.08	16.39
Appendicitis	1	.08	16.39
Undetermined	1	.08	16.39
EXTERNAL CAUSES.			
Gunshot wounds (homicidal, 7; suicidal, 5; accidental, 4)	16	1.32	307.69
Drowning (accidental, 12; suicidal while insane, 1)	13	1.07	250.00
Methyl alcohol poisoning	11	.91	211.54
Incised wounds (suicidal, 2; homicidal, 2)	4	.33	76.92
Fracture of skull (accidental, 2)	2	.16	38.46
Fracture of spine (accidental, 2)	2	.16	38.46
Other traumatisms (homicidal, found murdered, 1; accidental, 1)	2	.16	38.46
Dislocation cervical vertebra (accidental, 1)	1	.08	19.23
Crushing (run over by railroad train, accidental, 1)	1	.08	19.23
Total	113	9.31	1,000.00
Total diseases	61	5.03	539.82
Total external causes	52	4.28	460.18
Grand total	113	9.31	1,000.00

PHILIPPINE SCOUTS.

The following table shows the amount of sick for the year:

TABLE NO. 52.

	From all causes.		Excluding injuries, venereal diseases, and alcoholism.	
	Total.	In hospital.	Total.	In hospital.
Ratios per 1,000 of mean strength:				
Admissions to sick report	1,057.62	818.09	848.57	.....
Discharges on surgeon's certificate of disability	10.38	.....	10.19	.....
Deaths	8.26	.....	5.38	.....
Total losses	18.64	.....	15.57	.....
Noneffective from sickness	35.11	29.61	28.59	24.50
Average number of days lost:				
For each soldier	12.85	10.84	10.46	8.97
For each case	12.15	13.25	12.33	.....

The admission rate is less than for the preceding year, being 1,057.62 as compared with 1,114.55. The total loss and noneffective rates are, however, higher for the present year, being 18.64 and 35.11 as compared with 14.32 and 28.57 for the preceding year. This anomalous condition with a lower admission rate and a higher death rate is due to the fact that while there has been a very considerable decrease in rates for malarial fevers, 236.97 as compared with 312.67; dysentery, 11.41 as compared with 23.94; venereal diseases, 56.05 as compared with 63.48; diarrhea and enteritis, 39.53 as compared with 54.07; and dhobie itch, 21.63 as compared with 33.34, there has been a very great increase in beriberi, a disease of long duration and causing a considerable death and discharge rate. The admission rate for this disease was 121.53, as compared with 24.58 for 1907. The actual number of cases was 618, as compared with 115 for the preceding year, and the numerical loss, deaths, and discharges 20, as compared with 9. The death rate was also further increased by 8 from gunshot wounds and 4 from drowning, the deaths from these two causes for the preceding year being 1 and 2, respectively. The causes of death are shown in the following table:

TABLE No. 53.

Cause of death.	Number of deaths.	Ratio per 1,000 of—	
		Mean strength.	Total deaths.
DISEASE.			
Beriberi	7	1.35	241.38
Cholera Asiatica	4	.77	137.93
Tuberculosis (pulmonary 1, other organs 1)	2	.38	68.97
Cancer	2	.38	68.97
Organic diseases of the heart	2	.38	68.97
Pneumonia	2	.38	68.97
Abscesses of the liver	2	.38	68.97
Malarial fever (malignant, remittent)	1	.19	34.48
Smallpox	1	.19	34.48
Cholera nostras	1	.19	34.48
Syphilis, secondary	1	.19	34.48
Endocarditis, acute	1	.19	34.48
Gastro-enteritis	1	.19	34.48
Cirrhosis of the liver	1	.19	34.48
Biliary calculi (followed by gangrene of gall bladder and peritonitis)	1	.19	34.48
Total	29	5.57	1,000.00
EXTERNAL CAUSES.			
Gunshot wounds (suicidal, 3; accidental, 2; in action, 1; homicidal, 1; resisting arrest, 1)	8	1.54	571.43
Drowning (accidental)	4	.77	285.71
Incised wounds (homicidal)	2	.38	142.86
Total	14	2.69	1,000.00
Grand total	43	8.26	1,000.00

The principal differences from the preceding year are 4 deaths from Asiatic cholera as compared with 2; 2 deaths from tuberculosis as compared with 6; and no deaths from dysentery as compared with 3. The increase in deaths from gunshot wounds and drowning has been noted above.

The next table shows all discharges for disability.

TABLE No. 54.

Cause of discharge.	Number of cases.	Percentage of total discharges.	Not in line of duty.			Discharges for disability before assignment.	
			In line of duty.	Contracted before enlistment.	Contracted after enlistment.	In line of duty.	Not in line duty.
DISEASES.							
Tuberculosis, pulmonary	20	37.74	18	2			
Beriberi	13	24.53	6	7			
Insanity	4	7.55	3	1			
Amebic dysentery	2	3.77	1	1			
Melancholia	2	3.77	2				
Organic diseases of the heart	2	3.77	2				
Asthma	2	3.77	2				
Leprosy	1	1.89	1				
Trachoma	1	1.89	1				
Opacity of the cornea	1	1.89		1			
Night blindness	1	1.89		1			
Endemic hemoptysis	1	1.89	1				
Chronic cystitis	1	1.89		1			
Exostosis	1	1.89		1			
Senile debility	1	1.89		1			
Total	53	100.00	37	16			
EXTERNAL CAUSES.							
Fracture and amputation of thumb	1	100.00	1				
Total	1	100.00	1				
Grand total	54	100.00	38	16			
Diseases	53	98.15	37	16			
External causes	1	1.85	1				

The most notable difference in this table from the preceding year is in the number of discharges from beriberi—13 as against 3. This, in great part, accounts for the increased total of 53 as compared with 39.

The next table shows the influence of season.

TABLE No. 55.

Month.	Mean strength.	Ratios per 1,000 of mean strength. All causes. Admissions. Total.	Admissions. Hospital.	Deaths.	Noneffective. Total.	Noneffective. Hospital.	Exclusive of venereal diseases, alcoholism, and external causes. Admissions.	Deaths.	Noneffective.	Prevailing diseases (exclusive of venereal diseases, etc.).
Jan.....	4,484	79.58	59.74	0.66	22.05	18.42	58.40	0.66	15.68	Malarial fever, 58; acute abscess, 18; beriberi, 15; diarrhea and enteritis, 15.
Feb.....	4,688	85.54	65.06	1.46	29.04	25.79	70.82	1.04	21.90	Malarial fever, 83; beriberi, 35; constipation, 30; acute abscess, 24.
Mar.....	4,905	103.57	72.38	.59	36.53	27.34	82.98	.20	29.68	Beriberi, 105; malarial fever, 97; constipation, 37; acute bronchitis, 34.
Apr.....	5,064	100.12	78.79	.19	37.17	28.30	82.15	.19	30.27	Malarial fever, 199; beriberi, 20; acute bronchitis, 24; constipation, 19.
May.....	5,241	88.53	72.12	.78	35.96	30.79	74.00	.19	30.09	Malarial fever, 147; beriberi, 36; acute abscess, 25; acute bronchitis, 17; constipation, 17.
June....	5,192	88.02	68.57	.95	31.36	26.64	71.46	.76	25.40	Malarial fever, 110; beriberi, 36; diarrhea and enteritis, 35; acute bronchitis, 17.
July.....	5,283	96.91	73.63	.37	35.18	30.43	76.09	.19	28.62	Malarial fever, 100; beriberi, 55; acute abscess, 29; constipation, 26; diarrhea and enteritis, 25.
Aug.....	5,313	85.64	68.89	.19	41.41	36.97	69.83	.19	33.84	Malarial fever, 92; beriberi, 39; diarrhea and enteritis, 26; constipation, 21.
Sept....	5,197	81.39	64.08	.93	39.71	33.59	65.81	.37	33.43	Malarial fever, 93; beriberi, 63; acute abscess, 15; muscular rheumatism, 15.
Oct.....	5,167	85.54	65.22	.55	36.69	31.23	66.77	.55	30.27	Malarial fever, 75; beriberi, 64; acute abscess, 20; acute bronchitis, 18.
Nov.....	5,208	81.99	63.36	.92	36.37	31.09	65.86	.73	29.93	Beriberi, 82; malarial fever, 74; diarrhea and enteritis, 14; acute abscess, 14.
Dec.....	5,271	80.63	65.26	.73	36.10	31.38	63.18	.37	29.77	Malarial fever, 77; beriberi, 62; constipation, 17; acute bronchitis, 16.
Total .	5,085	1,057.62	818.09	8.26	35.11	29.61	848.57	5.38	28.59	Malarial fever 1,205; beriberi, 618; constipation, 237; acute abscess, 214; diarrhea and enteritis, 201; acute bronchitis, 197.

Excluding injuries, venereal diseases, and alcoholism, over which causes of admission the seasons have little or no influence, the highest admission rate is in March and the lowest in December.

The highest constant noneffective rate, however, is in August, and the lowest in January.

The lowest death rate was the same for April, May, July, and August, which were all months of a high constant noneffective rate, 30.27 to 33.34. The highest death rate was in February, and corresponded with a low constant noneffective rate.

RECRUITING.

The results of the examinations of applicants for enlistment in the Philippine Scouts are given in the following table and are of interest as showing the anthropometrical characteristics of the Filipino races. The proportion of recruits accepted is about the same as for 1907 and the number was somewhat less.

TABLE NO. 56.—*Examination of Filipino applicants for enlistment during 1908.*

	Number.	Ratio per 1,000 examined.
Examined by medical officers	2,761	1,000.00
Accepted by medical officers	2,506	907.64
By first enlistment	1,340	485.33
Other enlistments	1,166	422.31
Rejected by medical officers	[a] 232	84.03
Declined	23	8.33

[a] Of this number 5 were rejected for causes not physical.

Table 57 shows the ages of accepted recruits.

TABLE NO. 57.—*Filipino recruits (accepted).*

	Number.	Ratio.
18 years and under	3	1.20
19 years	8	3.19
20 years	21	8.38
21 years	530	211.49
22 years	266	106.15
23 years	182	72.63
24 years	290	115.72
25 years	262	104.55
26 years	203	81.00
27 years	190	75.82
28 years	169	67.44
29 years	91	36.31
30 years	67	26.74
31 years	69	27.53
32 years	49	19.55
33 years	34	13.57
34 years	17	6.78
35 years	12	4.79
36 years	18	7.18
37 years	10	3.99
38 years	6	2.39
39 years	4	1.60
40 years and over	5	2.00
Total	2,506	1,000.00

Sixty-two per cent were 25 years of age or under.

The next table (58) shows the height of recruits and the relation of height to age.

TABLE No. 58.—*Relation of height to age.*

ABSOLUTE NUMBERS.

Height.	Age.									Total.
	18 years and under.	19 years.	20 years.	21 years.	22 years.	23 years.	24 years.	25 years.	26 years and over.	
4 feet 10 inches and under				3	1		2	1	2	9
4 feet 11 inches	1			4			4		10	19
5 feet	1	1		15	17	5	16	15	34	104
5 feet 1 inch		1	4	52	37	9	29	21	89	242
5 feet 2 inches		1	2	122	51	47	50	41	135	449
5 feet 3 inches		2	4	100	47	38	46	62	186	485
5 feet 4 inches	1	1	8	103	51	29	56	50	191	490
5 feet 5 inches		1	1	63	38	21	44	35	127	330
5 feet 6 inches			1	34	11	18	26	24	89	203
5 feet 7 inches		1	1	22	8	5	9	9	52	107
5 feet 8 inches				7	1	5	4	2	23	42
5 feet 9 inches				3	4	3	2	1	4	17
5 feet 10 inches				1		1	1		2	5
5 feet 11 inches and over				1		1	1	1		4
Total	3	8	21	530	266	182	290	262	944	2,506

PROPORTIONAL NUMBERS.

4 feet 10 inches and under				5.66	3.76		6.90	3.82	2.12	3.59
4 feet 11 inches	333.33			7.55			13.79		10.59	7.58
5 feet	333.33	125.00		28.30	63.91	27.47	55.17	57.25	36.02	41.50
5 feet 1 inch		125.00	190.48	98.11	139.10	49.45	100.00	80.15	94.28	96.57
5 feet 2 inches		125.00	95.24	230.19	191.73	258.24	172.41	156.49	143.01	179.17
5 feet 3 inches		250.00	190.48	188.68	176.69	208.79	158.62	236.64	197.03	193.54
5 feet 4 inches	333.33	125.00	380.95	194.34	191.73	159.34	193.10	190.84	202.33	195.53
5 feet 5 inches		125.00	47.62	118.87	142.86	115.38	151.72	133.59	134.53	131.68
5 feet 6 inches			47.62	64.15	41.35	98.90	89.66	91.60	94.28	81.01
5 feet 7 inches		125.00	47.62	41.51	30.08	27.47	31.03	34.35	55.08	42.70
5 feet 8 inches				13.21	3.76	27.47	13.79	7.63	24.36	16.76
5 feet 9 inches				5.66	15.04	16.48	6.90	3.82	4.24	6.78
5 feet 10 inches				1.89		5.49	3.45		2.12	2.00
5 feet 11 inches and over				1.89		5.49	3.45	3.82		1.60
Total	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00

Fifty-two per cent of all recruits were 5 feet 3 inches or under; that is, below the minimum standard for American soldiers.

Table 59 exhibits the weights of Filipino recruits and the relation of weight to age.

TABLE NO. 59.—*Relation of weight to age.*

ABSOLUTE NUMBERS.

Weight.	Age. 18 years and under.	19 years.	20 years.	21 years.	22 years.	23 years.	24 years.	25 years.	26 years and over.	Total.
99 pounds and under			1	10	3	1	5	3	20	43
100 to 104 pounds		1	2	49	20	16	20	14	71	193
105 to 109 pounds	2	1	2	83	28	24	22	24	100	286
110 to 114 pounds		4	4	168	76	34	45	43	145	519
115 to 119 pounds			6	102	60	41	57	55	167	488
120 to 124 pounds	1	1	5	54	35	23	42	47	172	380
125 to 129 pounds				32	14	14	48	29	112	249
130 to 134 pounds		1	1	18	17	11	38	22	67	175
135 to 139 pounds				11	8	12	8	16	46	101
140 to 144 pounds				3	5	4	3	6	26	47
145 to 149 pounds						1	2	3	11	17
150 to 154 pounds									5	5
155 to 159 pounds									2	2
160 pounds and over						1				1
Total	3	8	21	530	266	182	290	262	944	2,506

PROPORTIONAL NUMBERS.

99 pounds and under			47.62	18.87	11.28	5.49	17.24	11.45	21.19	17.16
100 to 104 pounds		125.00	95.24	92.45	75.19	87.91	68.97	53.44	75.21	77.01
105 to 109 pounds	666.67	125.00	95.24	156.60	105.26	131.87	75.86	91.60	105.93	114.13
110 to 114 pounds		500.00	190.48	316.98	285.71	186.81	155.17	164.12	153.60	207.10
115 to 119 pounds			285.71	192.45	225.56	225.28	196.55	209.92	176.91	194.73
120 to 124 pounds	333.33	125.00	238.10	101.89	131.58	126.37	144.83	179.39	182.20	151.63
125 to 129 pounds				60.38	52.63	76.92	165.52	110.69	118.64	99.36
130 to 134 pounds		125.00	47.62	33.96	63.91	60.44	131.03	83.97	70.97	69.83
135 to 139 pounds				20.75	30.08	65.93	27.59	61.07	48.73	40.30
140 to 144 pounds				5.66	18.80	21.98	10.34	22.90	27.54	18.76
145 to 149 pounds						5.49	6.90	11.45	11.65	6.78
150 to 154 pounds									5.30	2.00
155 to 159 pounds									2.12	.80
160 pounds and over						5.49				.40
Total	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00

It will be observed that the weight of 82 per cent of all recruits is under 128 pounds, the minimum weight for American recruits.

Table 60 shows the chest measurements of recruits and the relation of chest measurements to age.

TABLE NO. 60.—*Relation of chest measurement to age.*

ABSOLUTE NUMBERS.

Chest measurement.	Age. 18 years and under.	19 years.	20 years.	21 years.	22 years.	23 years.	24 years.	25 years.	26 years and over.	Total.
26 inches and under	1			14					2	17
27 inches				38	2	2		1	7	50
28 inches		2	1	50	26	7	5	4	11	106
29 inches		2	4	87	39	26	28	13	76	275
30 inches	1	3	5	114	66	47	75	55	182	548
31 inches			6	112	54	39	66	75	243	595
32 inches		1	2	63	37	23	73	47	202	448
33 inches			1	34	27	17	26	37	132	274
34 inches	1		1	14	12	12	11	19	60	130
35 inches				3	2	7	6	11	20	49
36 inches and over			1	1	1	2			9	14
Total	3	8	21	530	266	182	290	262	944	2,506

TABLE No. 60.—*Relation of chest measurement to age*—Continued.

PROPORTIONAL NUMBERS.

Chest measurement.	Age.									Total.
	18 years and under.	19 years.	20 years.	21 years.	22 years.	23 years.	24 years.	25 years.	26 years and over.	
26 inches and under	333.33	.....	.....	26.41	.....	.....	.....	.....	2.12	6.78
27 inches	.....	.....	.....	71.70	7.52	10.99	.....	3.82	7.41	19.95
28 inches	.....	250.00	47.62	94.34	97.74	38.46	17.24	15.27	11.65	42.30
29 inches	.....	250.00	190.48	104.15	146.62	142.86	96.55	49.62	80.51	109.74
30 inches	333.33	375.00	238.10	215.09	248.12	258.24	258.62	209.92	192.80	218.67
31 inches	.....	.....	285.71	211.32	203.01	214.29	227.59	286.26	257.42	237.43
32 inches	.....	125.00	95.24	118.87	139.10	126.37	251.72	179.39	213.98	178.77
33 inches	.....	.....	47.62	64.15	101.50	93.40	89.66	141.22	139.83	109.34
34 inches	333.33	.....	47.62	26.41	45.11	65.93	37.93	72.52	63.56	51.88
35 inches	.....	.....	.....	5.66	7.52	38.46	20.69	41.98	21.19	19.55
36 inches and over	.....	.....	47.62	1.89	3.76	10.99	.....	.....	9.53	5.59
Total	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00

The minimum chest measure for American recruits is 32 inches at expiration. Sixty-three per cent of all Filipino recruits have a chest measurement below this limit.

The next table, No. 61, gives the causes of rejections among the 2,761 applicants for enlistment examined by medical officers during the year.

TABLE No. 61.—*Causes of rejection.*

	Total.	
	Number.	Ratio per 1,000 rejected for physical causes.
Under weight	29	127.75
Diseases of the heart	28	123.35
Venereal diseases	19	83.70
Diseases of the skin	17	74.89
Chest development insufficient	13	57.27
Defects of development, except as shown in detail	13	57.27
Tuberculosis	12	52.86
Defects of vision	11	48.46
Varicose veins, except varicocele	10	44.05
Diseases of the genito-urinary system (nonvenereal)	10	44.05
Hernia	9	39.65
Diseases of the respiratory system	8	35.24
Curvature of the spine	8	35.24
Weakness of the mind	7	30.84
Defects of hearing	6	26.43
Diseases of the eye, except defects of vision	4	17.62
Varicocele	4	17.62
Defective teeth	4	17.62
General diseases except as shown in detail	3	13.22
Diseases of the digestive system, except as shown in detail	3	13.22
Diseases of the organs of locomotion, except as shown in detail	3	13.22
Under height	3	13.22
Diseases of the ear, except defects of hearing	2	8.81
Diseases of the nervous system, except weakness of mind	1	4.41
Total	227	1,000.00

Defects of vision, which in 1907 constituted the principal cause for rejection, have for 1908 fallen to the eighth place. In spite of the low standard of weight required for these troops, 43 being accepted with a weight of 99 pounds or less, it is seen that under weight is the largest cause of rejection; heart disease being second, with a rate of 123.35, as compared with 87.99 for American soldiers.

SURGICAL OPERATIONS.

One hundred and nine operations were performed upon the Philippine Scouts, 105 of which were successful, with 3 deaths, due, 1 to an exploratory operation for cancer of the liver, 1 splenectomy, and 1 laparotomy for gunshot wound of abdomen.

TABLE No. 62.—*Surgical operations performed on Filipino troops.*

Operation.	Disease or injury.	Cases.	Result.			Anesthetic.				
			Successful.	Partially successful.	Failure.	Died.	Chloroform.	Ether.	Chloroform and ether.	Local.	None.
	Neck and thorax.										
Aspiration, 1; paracentesis, 1	Pleurisy	2	2							2	
	Abdomen.										
Exploratory infra-costal incision, resection of tenth rib, and evacuation of blood clot.	Carcinoma of liver, all lobes, and pulmonary hemorrhage, clot filling entire pleural cavity.	1				1		1			
Splenectomy	Cirrhosis of liver and hypertrophy of spleen.	1				1		1			
Cholecystotomy	Cholecystitis	1	1					1			
Do	Gallstone, impacted	1	1					1			
Appendectomy, 1; incision and drainage of abscess, 1.	Appendicitis	2	2					2			
Bassini's operation, 3; divulsion of constriction for strangulated hernia, 1; excision of sac, and suture of external, oblique fascia, 1.	Hernia, inguinal	5	5				1	4			
Laparotomy	Gunshot wound of abdomen	1				1	1				
Incision, examination of gut, and drainage.	Wound, incised, penetrating abdomen.	1	1				1				
	Anus and rectum.										
Curettage	Fistula in ano	1	1					1			
Incision and drainage	Ischio-rectal abscess	2	2							2	
Excision	Hemorrhoids, site not stated	2	2							2	
	Genito-urinary system.										
Supra-pubic excision	Varicocele	4	4				1	3			
Circumcision	Phimosis, 7; constricted prepuce, 5.	12	12				4			8	
	Vascular system.										
Excision, 2; excision entire internal saphenous vein, 2.	Varicose veins	4	4				1	3			
	Lymphatic system.										
Incision and drainage	Adenitis, cervical	2	2					1	1		
Extirpation	Adenitis, cervical tubercular	2	2				2				
Extirpation, 2; incision and drainage, 5.	Adenitis, inguinal venereal	7	7				2	2		1	2
Incision and curettage, 3; extirpation, 2.	Adenitis, inguinal nonvenereal	5	5				2	3			
	Muscles, tendons, fasciæ, ligaments, and bursæ.										
ncision and drainage	Bursitis, prepatellar	1	1							1	
	Skin and cellular tissues.										
Excision, 1; curettage, 1; incision and drainage, 2.	Carbuncle	4	4				2	2			
Incision and drainage	Whitlow	2	2							2	
Do	Mastitis, suppurative	1	1							1	
Do	Cellulitis	3	3				1			1	1
Do	Infected wound	3	3				3				
Incision and drainage, 15; incision and curettage, 2.	Abscess	17	17				1	3		1	12
Excision	Keratoma	1	1							1	

TABLE No. 62.—*Surgical operations performed on Filipino troops*—Continued.

Operation.	Disease or injury.	Cases.	Result.				Anesthetic.				
			Successful.	Partially successful.	Failure.	Died.	Chloroform.	Ether.	Chloroform and ether.	Local.	None.
	Bones.										
Sequestrotomy	Necrosis inferior maxilla	1	1				1				
Removal of bone fragments	Gunshot wound, forearm	1			1		1				
Removal of portion of phalanx, and suture of tendon and skin.	Lacerated wound, involving metacarpal bone, and head of first phalanx.	1	1					1			
Osteotomy	Enlarged head, fifth metatarsal bone.	6	6					6			
Incision and drainage	Periostitis suppurative great toe.	1	1							1	
	Joints.										
Incision and drainage	Gunshot wound, knee joint	1	1				1				
	Bolo wound, radio-carpal joint	1	1					1			
	Amputations.										
Amputation of arm, middle third.	Gangrene following gunshot wound of forearm.	1	1				1				
Amputation	Fracture, compound, of thumb	1	1				1				
Do	Fracture, compound, of finger	2	2					2			
	Tumors.										
Excision	Fibroid	1	1							1	
Enucleation	Sebaceous cyst	4	4				1			3	
Total cases		109	105		1	3	28	38	1	27	15

PREVALENCE OF DISEASE BY RACES.

In making this comparison it is to be borne in mind that the native troops were serving in their own country under conditions natural to them, but inimical to our troops, and that American soldiers excused from any portion of their military duty, no matter how trivial the cause, are placed on sick report, while this is not the case with the Philippine Scouts.

The admission, constant noneffective, and death rates were much lower for Filipino than for American troops serving in the Philippines, but the discharge for disability rate was 10.38 for the former and 8.65 for the latter.

The following table indicates the relative susceptibility of the two races to the diseases noted:

TABLE NO. 63.

Disease.	Admission rates.			
	American troops.			Filipino troops.
	Total.	White.	Colored.	
Venereal diseases	194.13	186.35	348.08	56.05
Tonsillitis	55.58	57.32	21.00	4.52
Diarrhea and enteritis	53.27	53.15	55.68	39.53
Furuncle	32.90	31.93	52.18	23.60
Influenza	29.91	31.17	4.77	3.74
Alcoholism	29.42	30.32	11.45	.98
Muscular rheumatism and myalgia	26.40	25.63	41.68	18.09
Dengue	18.41	11.82	148.90	11.01
Measles	16.11	16.78	2.86	.00
Articular rheumatism, acute and chronic	14.01	13.36	26.72	5.31
Appendicitis	4.48	4.56	2.86	.20
Typhoid fever	3.29	3.42	.64	1.77

Disease.	Filipino troops.	American troops.		
		Total.	White.	Colored.
Malaria	236.97	46.33	45.55	61.72
Beriberi	121.53	.02	.02	.00
Bronchitis, acute and chronic	42.08	34.26	33.69	45.50
Dhobie itch	21.63	4.48	3.77	18.45
Dysentery	11.41	7.34	6.75	19.09
Tuberculosis, all	6.49	4.51	4.35	7.64
Pneumonia	2.75	2.11	2.14	1.59
Asiatic cholera	.79	.21	.14	1.59
Smallpox	.39	.23	.19	.95

The rates for diarrhea and enteritis, dysentery, and dengue all were higher among American troops, as was the case last year also. Tuberculosis is this year greater among the Philippine Scouts.

The excessive prevalence of malaria among the Filipinos, ratio of 236.97 as compared with the admission rate among the American troops of 123.97, shows the efficacy of the greater care in protecting the latter by the screening of buildings and providing of mosquito bars, in spite of the natural greater susceptibility of the whites, which compose the great majority of the American troops in the Philippines.

The great prevalence of beriberi among the Philippine Scouts as compared with the almost entire absence of the disease among the American troops, is believed to be due principally to a difference in racial susceptibility, although in the absence of any definite knowledge of this most puzzling disease, this must be regarded as an assumption rather than a statement of fact.

Beriberi occurred at 26 posts, the greatest number being at Camp Gregg. The surgeon reported as follows to the chief surgeon, Department of Luzon, concerning the outbreak at that post:

In compliance with paragraph 442 (M. M. D., 1906), I have the honor to submit the following report of an epidemic of beriberi at this post from July 2, 1908, to May 15, 1909:

There were a total of 61 cases, and of these 18 were readmitted at least once during the course of the epidemic. All the cases were among native troops. Fifty-eight cases occurred in the Fifth Battalion of Philippine Scouts, and 3 cases in the Seventh Battalion shortly after its arrival at this station from Mindanao, between February 19 and March 13, 1909.

All were returned to duty with the exception of 2, 1 of whom was discharged on surgeon's certificate of disability for disability resulting from beriberi, and 1 was discharged for disability resulting from loss of right thumb. The latter had recovered from beriberi when discharged.

In the cases occurring in the Fifth Battalion the disease apparently originated at this post. The last case in the Fifth Battalion occurred on December 5, 1908, and there were no further new cases until March 15, 1909. These new cases originated in the Seventh Battalion shortly after its arrival from Mindanao for permanent station here. These last 3 patients stated that they first noticed symptoms of beriberi about March 8, 1909, while on the transport en route from Mindanao, and it would seem that the disease originated in Mindanao.

The greatest number of cases occurred during July, 1908, the first month of the outbreak, when there were 23 cases. There was a steady decline during the succeeding months until in December, 1908, when there was but 1 new case admitted. There were no new cases from December, 1908, until March, 1909, when the 3 new cases in the Seventh Battalion mentioned previously came on sick report. There have been no new cases since those admitted in March, 1909.

The requirements of General Order 115, Headquarters Department of Luzon, series 1908, were complied with. After the first month the disease gradually declined. The last 3 cases did not present any indications for medication, and none was given, and after a short while were returned to duty.

There were no deaths.

Col. L. M. Maus, chief surgeon of the Department of Luzon, believing that the evidence in support of the theory of contagion, or place infection, was sufficient to warrant the measures of careful isolation and disinfection, he procured the issue of an order enjoining these. (G.O., 115, Headquarters Department of Luzon, Aug. 6, 1908.) It was ordered that patients be moved out of the buildings in which the disease was contracted and treated in dry, sunny buildings or hospital tents with floors raised at least 1 foot above the ground. Upon the occurrence of a case of beriberi in the command, the building and property of the patient was carefully disinfected, and all the property of the command was exposed to the sun for at least four hours. All cases of suspects were isolated and quarantined until fit for duty, and upon being returned to duty their persons and clothing were washed with a disinfectant.

Lieut. H. C. McLeod, Medical Reserve Corps, called attention to the fact that Baelz had found that indican was present in large amounts in the urine of all patients suffering from beriberi. Lieutenant McLeod therefore assumed that all cases of beriberi suffered from proteid putrefaction in the intestines, due to the greatly increased and more highly proteid ration which the Philippine Scout received in the military service, as compared with that to which he was accustomed. It will be observed that this theory is directly at variance with that of Takaki.

The board for the study of tropical diseases, to which the report of Lieutenant McLeod was submitted, concluded, after a discussion of the causes of indicanuria in the disease, as follows:

With these facts in view, it is but reasonable to suppose that increased proteid decomposition, with the presence of indican in the urine in increased quantity, is a result of the disease rather than a causative factor. * * *

Of the many theories regarding the cause of beriberi, the one which appeals to us as the most likely is that it is a specific germ disease, the causative organism gaining entrance to the system through the medium of rice, and causing a primary lesion of some portion of the gastro-intestinal tract, the neuritis being resultant of a toxin generated by this organism. The theory advanced by Lieutenant McLeod is so opposed to experience with the disease that it is not considered advisable to pursue investigation along the line indicated.

The whole question of beriberi is so baffling that it is thought that when the personnel of this board is changed this disease should be assigned to it as a subject for investigation for the year or two years for which the new members will be detailed. The present board is so involved in the details of colored underclothing experiment that it would not be able to devote proper time to this important disease.

A statement of the lines upon which the work has been begun is given below in mentioning the reports received from this board.

A case of leprosy developed during the year covered by this report in the person of a Philippine Scout of the Forty-ninth Company at Camp Hayt, Samar. He was under observation from January 8, 1908, and was discharged on surgeon's certificate of disability on September 6, 1909.

A case of leprosy in the person of a white American soldier of the Twenty-sixth Infantry is mentioned in the report of the chief surgeon, but does not appear in the tabular statement of diseases because the diagnosis was made after the end of the calendar year. He states that a swelling in the soldier's right hand was first observed in 1903. This soldier has had much tropical service, having arrived in the Philippines in July, 1898, and remained until November, 1899. He served in Porto Rico from March to November, 1900, returning to the Philippines in June, 1901, and remaining until December, 1905. He returned to the Philippines in July, 1907, and, in view of his diagnosis, will probably have to remain there for the rest of his life unless the establishment of a government leprosium in the United States should make it possible for him to be brought home for treatment.

SANITATION IN THE PHILIPPINES.

The chief surgeon of the Philippines Division, Col. L. M. Maus, Medical Corps, in his report for the year 1908 has the following to say with regard to general sanitary questions:

Sanitary conditions, in general, of all posts are good considering the primitive condition of many of the buildings and the lack of modern methods of sanitation. The construction of most posts, in regard to architecture and material, are practically identical, except as to their sizes, and consist of one-story pavilion barracks and bungalows, constructed of rough, unplaned, battened pine lumber, with rubberoid and galvanized-iron roofs. The windows and doors are very crude, and the buildings are so open that protective wire screening at present against malaria and dengue would be practically impossible. Troops serving at permanent posts in the Philippines should be provided with two-story reenforced concrete quarters, the dormitories being invariably on the second floor. These buildings should contain ample space for kitchens, mess halls, amusement rooms and libraries, offices, storerooms, etc., with broad concrete piazzas, both above and below, around the entire building. The upper piazza should be entirely inclosed in 18-mesh gauze, besides the doors and windows of the building. With such precautions it is possible to keep the men practically free from malarial infection, for the reason that the anopheles are night mosquitoes and rarely do any harm during the day.

DISPOSAL OF EXCRETA.

Excreta, except at the few posts having sewer systems, is disposed of by means of a dry-earth system on a modified form. Sewer systems should be installed at all permanent posts.

Crematories of suitable capacity should be provided at all permanent posts, in order to dispose of slops, garbage, stable manure, and other rubbish; also for the disposal of night soil at posts not supplied with a sewer system.

WATER SUPPLY.

Boiled or distilled water is used at most posts in the division. At Fort William McKinley, Camp Stotsenburg, and Macabebe water is obtained from artesian wells. At Camp Eldridge the water is piped to buildings direct from a mountain stream. It is recommended that artesian wells be drilled at all permanent posts in the division not already supplied with such wells.

FOOD SUPPLIES.

With the exception of the flour, little or no complaint has been heard from any of the commands on the score of poor food during the year. Owing to their isolation it was impossible to ship ice and fresh meats to some of the posts. The rations appear suitable and the men well nourished.

CLOTHING.

The khaki clothing furnished troops for the Philippines is very suitable. The same may be said of the foot gear. For the rainy season the felt fatigue hat serves a good purpose, though, like the khaki cap, it is not adapted to the dry, hot season. It is my opinion that a ventilating band, one-fourth of an inch thick, should be placed inside of the fatigue hat at the brow band, to admit of the circulating of air around the head. The crown of the hat should be also an inch higher, with ventilators on the side. The crown of the hat should be worn also in the form known as the "Montana peak," instead of the crease. For the hot, dry season a light-weight khaki helmet, with brow and crown ventilators, would prove far more productive of health and comfort than the present head gear, and no doubt, in many instances, avert headaches and slight attacks of heat stroke.

SANITARY RECOMMENDATIONS.

The recommendations in the sanitary reports relate mainly to the necessity of establishing sewer systems and systems of pure water supply and to the leaks and other defects in the temporary barracks, quarters, and hospitals which are occupied at most of the posts.

TYPHOON.

On September 23, 1908, a typhoon is mentioned as having destroyed most of the buildings at Tagabiran, Gandara, Borongan, and Camp Hayt on the Island of Samar, and Tolosa on the Island of Leyte, causing much discomfort to the garrison, especially to the women and children.

SCREENING OF BARRACKS.

Much work has been done during the year in the way of screening the more permanent barracks and quarters as a protection against mosquitoes, and the great sanitary value of this work is shown by the steady reduction in the admissions for malaria. It is of greatest importance from a sanitary point of view that the nipa constructions, which can not be satisfactorily screened, should be replaced by permanent buildings with screened verandas, along the lines recommended by the chief surgeon in his report just quoted.

SEWERAGE.

Until the sewers can be placed in the many posts that now lack them the substitution of McCall incinerators for less satisfactory methods of disposal of excreta, as recommended in my last annual report, should be hastened.

WATER SUPPLY.

The success of the army in protecting itself against Asiatic cholera and dysentery, in spite of the unsatisfactory character of the water supply at many of the posts, is a most creditable evidence of the conscientious care taken in sterilizing the water and the precautions against contact infections.

CAMPAIGN HAT AND KHAKI CAP AND ORANGE-COLORED UNDERWEAR.

The surgeon (Fort William McKinley) in his sanitary report for August, 1908, makes the following recommendations:

A suitable, well-ventilated helmet should be used, except in field service, where campaign hat is indicated. The hat does not protect the back of the head and neck, and very slightly the eyes from the glare of the sun. The temperature of the surface of the head under the hat is above that under the helmet, and in a good many cases the individual suffers from headache which is relieved by use of the helmet.

The surgeons at Borongan and Camp Gregg also found fault with the campaign hat, and especially with the khaki cap, and they recommend the adoption of a light helmet.

An investigation by the board for the study of tropical diseases of the value of orange-colored underwear for the exclusion of the short actinic rays of sunlight, which according to a theory which has recently attracted much attention are injurious to the health, is described by the chief surgeon in his annual report as follows:

On December 27, 1907, the Inspector-General of the Army addressed a letter to The Adjutant-General submitting extracts from annual report of the inspector-general, Philippines Division, in regard to the value of orange-red underclothing as a protection from the effects of the tropical sun, and recommending that 5,000 suits of such garments be sent to this division for a trial. The recommendations were approved, and in due course the correspondence reached this office, for the drawing of a plan for the experiment, as recommended by the Surgeon-General. In consultation with the members of the board for the study of tropical diseases the chief surgeon drew up a scheme for the proposed experiment, supervision of which was to be by the board. This plan, which was approved by the division commander, provided for a test upon approximately 1,000 men, half of whom were to wear the colored underclothing, the other half to wear white underclothing of similar weight, to serve as controls.

Organizations having over a year to serve in the division were selected to furnish the subjects for the test, the First Cavalry at Camp Stotsenburg, the Fifth Artillery at Camp Jossman, and the Twenty-third Infantry at Zamboanga, thus taking in each branch of the service and each department. A medical officer was designated at each of these posts, who was to have charge of the details of the experiments, and who was to stay with the selected organizations during its course. In addition to organizations, all officers in the division were invited to supply themselves with the underclothing and to submit a report thereon after a thorough trial.

The underclothing arrived in December and has been issued to the troops selected. The success of the experiment was somewhat jeopardized by the large percentage of small sizes of underclothing sent. This has necessitated a selection of men not contemplated in the plan; but it is not thought that this will greatly interfere with a conclusive test.

The plans for the experiment contemplate a comparative record of strength and blood-pressure tests of pulse, respiration and temperature after fatigue, practice marches or drills, of all symptoms referable to the effect of the sun after exposure thereto, and a measure of anæmia by red and white blood corpuscle counts, differential leucocyte counts, and hemoglobin estimations. Special tests will be carried out upon a small number of men in addition.

Experimental work upon the effects of heat and light upon small plant and animal life is also contemplated. The experiment is now in full progress, and it is thought that some conclusive evidence will result.

The campaign hat is at any rate free from the reproach of admitting the actinic rays of light, since recent experiments with sensitive photograph plates have demonstrated that it is quite impervious to them, and no additional protection is, therefore, added by an orange-colored lining.

This hat would undoubtedly, however, be much more comfortable and appropriate for the Tropics if some form of ventilated hatband were provided.

TRANSPORTS.

SANITARY CONDITION.

The sanitary condition of the various transports and the accommodations provided for troops on them has been in the main satisfactory, and the sanitary faults which have arisen from time to time have been corrected with promptness.

Outbreaks of mumps and measles occurred on some of the transports, but they were in all cases promptly isolated, and the infection was as a rule successfully combated.

During the voyage of the *Buford* from Manila to Nagasaki in October, 2 cases of cholera developed. The first case reported thirty-six hours after leaving Manila and died the same day. A few hours after the death of the first patient the second case developed and was transferred to the Quarantine Hospital at Nagasaki and the ship disinfected. Both cases were thought to have been infected at Manila.

In the voyage of the *Buford* from San Francisco to Manila in February, 30 cases of measles and 10 of mumps occurred. On the voyage of the *Thomas* from Manila to San Francisco, arriving at the latter port May 12, 1908, 51 cases of measles and 12 of mumps developed.

Two cases of smallpox developed on the transport *Sherman* between May 22 and June 12, 1908, while en route from Manila to San Francisco. The second case was believed to be a contact from the first. The first case died and the second was transferred to the Quarantine Hospital at Astoria, Oreg.

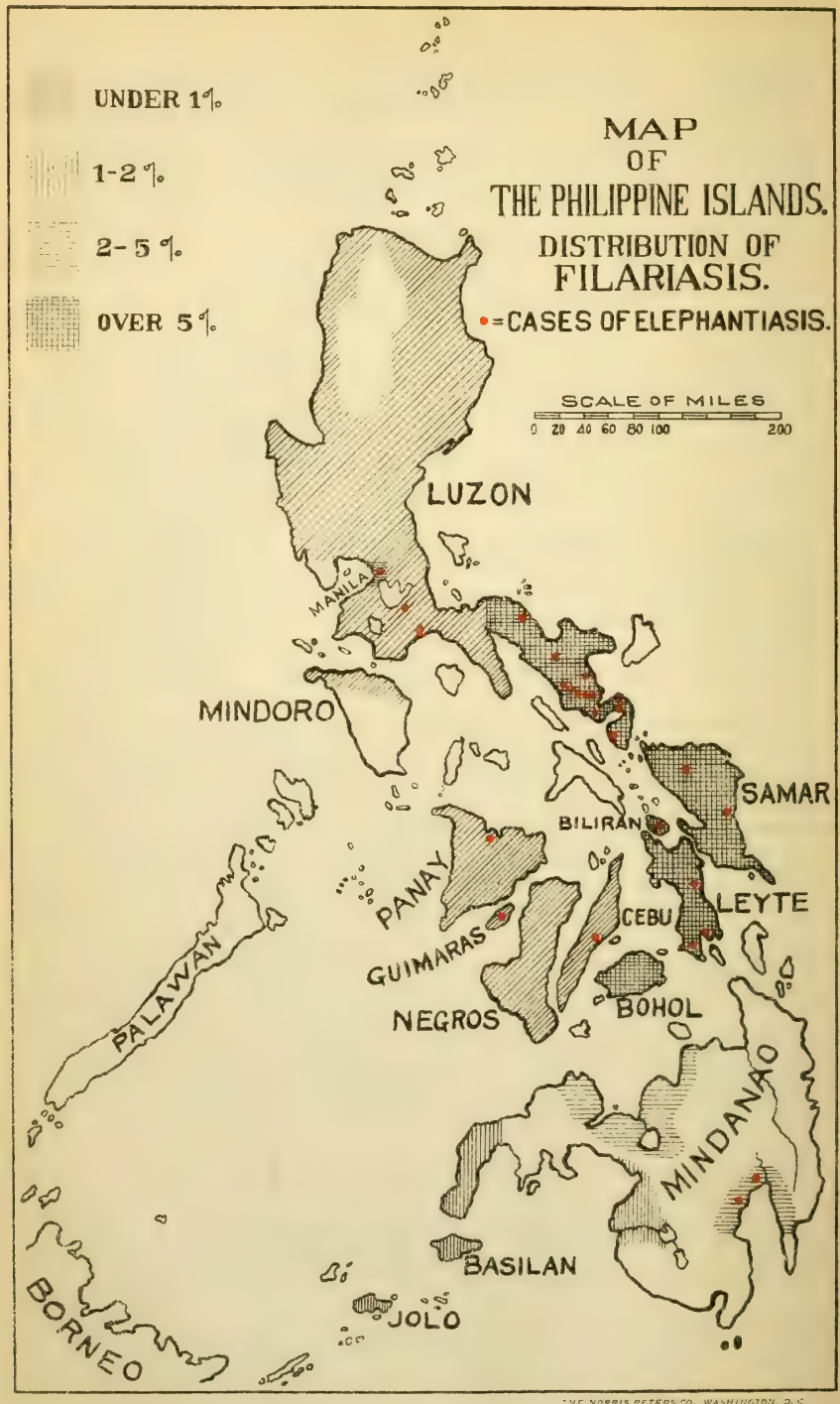
Two cases of Asiatic cholera appeared on the transport *Sheridan* on September 15 and 16, respectively, while at Mariveles, P. I. It is believed that these infections were contracted in Manila.

During the year 1908, 3,443 enlisted men were transported from the United States to the Philippines, and 4,097 were returned to the United States from the Philippines; also 817 were transported to Alaska, and 517 returned from Alaska to the United States.

BOARD FOR THE STUDY OF TROPICAL DISEASES.

During the year 1908 the board was composed of Capt. William N. Phalen and Lieut. Henry J. Nichols. Since the end of the year Maj. W. P. Chamberlain and Capt. E. D. Kilbourne have been added to the board.

The board has made during the year a number of very interesting reports of its investigations, several of the more important of which have been already published.



THE NORRIS PETERS CO., WASHINGTON, D. C.

FILARIASIS.

A very extensive and laborious study of the distributions of the filarial infection has been made, including examinations of nearly 6,400 individuals, with positive findings in 127, showing nearly 2 per cent of infection for the islands. The localities covered by these infections embrace nearly the whole of Luzon, the upper islands of Visayas, the northern end of Mindoro, and scattered sections near the coast of Mindanao.

The following table shows the distribution of the infection, and it is also shown graphically by the map facing this page:

TABLE NO. 64.—*Distribution of Filaria nocturna in the Philippine Islands.*

Source.	Number examined.	Infected.	
		Number.	Per cent.
Ilocanos (Ilocos Norte, Ilocos Sur, and Union)	1,019	6	0.58
Cagayanes (Cagayan, Isabela, Infanta, and Nueva Vizcaya)	394	1	.26
Pangasinans (Pangasinan, Tarlac, Nueva Ecija, and Zambales)	374	0	.....
Pampangans (including Macabebes)	1,140	1	.09
Tagalogs (Bulacan, Rizal, Cavite, Laguna, Batangas, Tayabas, and Mindoro)	399	2	.53
Tagalogs in Manila	292	13	4.4
Bicols (Ambos Camarines, Albay, and Sorsogon)	365	37	10.1
Inhabitants of—			
Bohol	27	2	7.4
Cebu	519	3	.57
Leyte	253	20	7.8
Negros	131	2	1.5
Panay	536	4	.74
Samar	141	4	2.8
Cotabato	390	4	1.3
Lanao and Misamis	191	9	4.7
Zamboanga	172	2	1.25
Davao	.....	15	.....
Miscellaneous	41	0	.....
American negro soldiers	420	2	.48
Total	6,804	127	1.87

The enlisted personnel of the Philippine Scouts furnished 483 subjects for examination, the remaining number being made up of house servants, quartermaster's employees, the inmates of provincial jails, and others from whom blood specimens could be obtained. The colored soldiers had all been serving in the Cotabato district of Mindanao for over a year before the examinations were made. One of those found infected was from Charleston, S. C., where cases of filariasis are occasionally seen, and the other was from Porto Rico where the disease is common. It is doubtful, therefore, where these men became infected, but as the Porto Rican had been in the Philippine Islands only five months when the parasite was found, and the two men had served together in the same company for two years, it is possible that the Porto Rican was infected in his own country and was the source of infection for the other case.

In order to see whether this disease had involved the white American troops, an examination was made of the blood of 250 American soldiers and of the Twenty-sixth Infantry and the Hospital Corps, who had been stationed for eighteen months at Camp Daraga, Albay, in the most highly infected filarial district of the islands. Contrary to expectation, no case of infection was found, although the percent-

age of filariasis in the province of Albay is about 10 per cent among the entire population. The board interprets this as evidence that with ordinary precautions the protection of white people from filariasis is not difficult.

As regards the identification of the filarial parasites and the practical conclusions to be drawn from a study of the distribution, the board says:

Only a small number of the cases seen or reported have been studied with a view to the identification of the parasite. Such as we have studied, however, have shown embryos fulfilling the requirements of the micro-filaria Bancrofti, perhaps more widely known as the filaria nocturna. No specimen of the adult worm has been seen, so that identification has been made wholly by means of the embryo. No example of the filaria philippinensis of Ashburn and Craig has been observed.

From the southern islands medical officers of the army have reported a microfilaria without a sheath and with apparently diurnal periodicity, but these observations have not been verified.

Of the filaria of the lower animals, the filaria immitis of the dog and a filaria analogous to the filaria loa of man, but parasitic in the horse, are known to occur here. * * *

PRACTICAL CONSIDERATIONS.

Since filariasis possesses such disastrous potentialities, it should be incumbent upon us to take precautions against it, especially in sections where it is known to be most prevalent. These precautions are not difficult, and as the protection from mosquitoes is one of the prime requisites, and is a matter quite as much of comfort as of safety, this measure is usually fairly well carried out. The other measure, also very easy, is the examination at night of the blood of the house servants for the parasite, and the prompt discharge of any that are found infected. No consideration should suffice to keep a subject harboring filariæ about the house of an American or European. Any measure of protection for the mass of the Filipino people must be hopeless, unless possibly a mosquito crusade covering the whole islands were undertaken, but the energy of such crusades is usually too quickly dissipated to avail much against such a persistent disease.

The investigation of the Philippine Scouts will probably result in the discharge of the infected individuals, and the examination of the blood for filariæ, of applicants from areas which have shown a high percentage of infection, required as a part of the examination for enlistment in that branch of the army.

ELEPHANTIASIS.

A very unusual number of cases of chylous hydrocele and elephantiasis of the scrotum were found, as well as elephantiasis of the legs and varicose groin glands, by the board during the visit to Samar.

BLASTOMYCOSIS OF THE SKIN.

In accordance with instructions from this office to make a special study of the parasitic diseases of the skin and to isolate and cultivate the fungi causing them, the board has made a very interesting study of these conditions. Their conclusions are as follows:

In the Philippines a blastomycotic infection of the skin is one of the common skin diseases. It exists in at least three forms, two of which are milder than those seen in the United States. It is usually unrecognized, in milder forms passing as ringworm or some form of dhobie itch; in severer forms as tuberculosis or syphilis. The milder forms yield to local antiseptics, the more chronic and sever only to potassium iodide internally. Further development of the subject will be necessary before these forms, as well as those found in horses, in ulcers, in sprue, and hill diarrhea, can be definitely classified.

The report gives in full the clinical peculiarities of the three types and the cultural peculiarities of the fungus which appear to be identical in all the types.

PSILOSIS.

In view of the suggestion of Dantec that this disease was due to infection of the intestinal tract by fungi allied to the blastomycosis, and having found a great quantity of these organisms in the stools of two cases of hill diarrhea, the board instituted careful examinations of the stools of all cases of sprue that could be obtained. While blastomycotic forms were found in many of these cases, neither they nor any other fungi were constant. Acid fast yeasts were found with considerable frequency, but were also found in other diarrheas and at times in normals also.

The board found the cases stated to show every gradation between chronic diarrhea, with perhaps nothing more than flatulence to suggest sprue, up to the classical types of the latter disease.

The so-called "hill diarrhea" of Baguio was found to be especially prone to be followed quickly by symptoms of psilosis.

The treatment of sprue with milk inoculated with lactic-acid bacillus has proved of marked value.

UNCINARIASIS.

The board comments on the great frequency of the hook-worm infections in the Philippines and the comparative scarcity of clinical symptoms referable thereto. They conclude that the clinical manifestations are largely a question of the number of parasites existing in the patient. In 20 autopsies made upon native subjects, 75 per cent showed hook worms, but in only one case did the number exceed 20, and in this case the number was not more than 60. The mild influence of the infections usually found in natives of the Philippines as compared with the very grave types seen in Porto Rico is believed to be due largely to the great opportunities given by the mode of life of the latter for repeated and heavy infections.

In an examination of 528 white American soldiers of the Eighth Infantry, 48, or 9.09 per cent, were found to be infected with hook worms. As these men do not go barefoot and gave no history of antecedent, it is difficult to see how the infection could have taken place through the skin, and the inference is, therefore, that even if the skin is the usual route of hook-worm infection it is by no means the only or even the usual route among white men.

PARAGONIMIASIS.

In addition to the 4 cases of pulmonary paragonimiasis given in my last annual report, 9 additional cases are reported, one of them in the American Army. All came from the island of Samar, and the board concludes that the upper Gandara Valley is an endemic area for this disease, and the same is probably true for the whole interior island. Repeated efforts by Ford to infect a monkey with this parasite failed.

SCHISTOSOMIASIS.

A case of this disease additional to that mentioned in my last report was discovered in the person of a Philippine Scout who died of beriberi. Eggs of *Schistosomum japonicum* were found in large

numbers in the connected tissues of the liver, colon, and appendix. Both cases occurred in the Catubig river valley, in northern Samar.

The experience of the board is in harmony with reports recently published of the result of the examinations of over 4,000 Bilibid prisoners, which showed a great preponderance of trematode infections from the islands of Samar and Leyte.

DENTAL AND ORAL DISEASES.

The number of dental operations during the year was 45,841, being an increase over the preceding year, for which the number was 39,362. The ratio per thousand of mean strength was also slightly greater, being 700.87, as compared with 673.06. This, however, can not be taken as a measure of the movement of dental diseases in the army, because, as stated elsewhere in this report, the number of dental surgeons is entirely too small to furnish treatment for the army and many cases requiring treatment must necessarily be neglected or treated by civilian dentists.

A summary of the work of the contract dental surgeons is contained in Table No. 65.

TABLE NO. 65.

DENTAL AND ORAL DISEASES.

	United States (continental) exclusive of Alaska.		Philippine Islands.		Alaska.	
	Number.	Ratio per 1,000 of mean strength.	Number.	Ratio per 1,000 of mean strength.	Number.	Ratio per 1,000 of mean strength.
Cases admitted to treatment	23,212	501.17	17,088	1,427.45	353	347.78
Operations performed	24,631	531.80	16,337	1,364.71	346	340.89

	Cuba.		Hawaii.		Total.	
	Number.	Ratio per 1,000 of mean strength.	Number.	Ratio per 1,000 of mean strength.	Number.	Ratio per 1,000 of mean strength.
Cases admitted to treatment	3,826	815.08	.....	.....	44,479	680.04
Operations performed	4,527	964.42	.....	.....	45,841	700.87

DENTAL CARIES—NUMBER OF TEETH TREATED.

	United States (continental) exclusive of Alaska.		Philippine Islands.		Alaska.	
	Number.	Ratio per 1,000 of mean strength.	Number.	Ratio per 1,000 of mean strength.	Number.	Ratio per 1,000 of mean strength.
White troops	14,118	309.66	8,061	830.09	288	283.74
Colored troops	96	132.60	1,211	535.84	.....	.....
Filipino troops	.....	.....	1,258	247.39	.....	.....
Total	14,214	306.89	10,530	617.38	288	283.74

TABLE No. 65—Continued.

DENTAL CARIES—NUMBER OF TEETH TREATED—Continued.

	Cuba.		Hawaii.		Total.	
	Number.	Ratio per 1,000 of mean strength.	Number.	Ratio per 1,000 of mean strength.	Number.	Ratio per 1,000 of mean strength.
White troops	2,653	565.19	.....	.....	25,120	406.45
Colored troops	.....	.....	.....	.....	1,307	415.84
Filipino troops	.....	.....	.....	.....	1,258	247.39
Total	2,653	565.19	.....	.....	27,685	392.75

MEDICAL DEPARTMENT.

The Medical Department consists of a Medical Corps, a Medical Reserve Corps, the Hospital Corps, the Nurse Corps, and the Dental Surgeons now authorized by law.

MEDICAL CORPS.

Authorized strength, June 30, 1908	356
Increase, January 1, 1909, by act of April 23, 1908	34
Authorized strength, June 30, 1909	390
In service, June 30, 1908	301
Appointed during year	6
	307
Losses during year	24
In service, June 30, 1909	283

Twenty-nine officers of the Medical Reserve Corps who successfully completed the course of study at the Army Medical School and were found qualified for appointment in the Medical Corps were commissioned about the close of the year. Only 2 of these had accepted by June 30, the date of the above tabulation. The 27 others have accepted since that date.

Losses during the fiscal year.

	Brigadier-general.	Colonels.	Lieutenant-colonels.	Majors.	Captains.	First lieutenants.	Total.
Retired	1	2	.....	6	4	4	17
Resigned	.....	.....	.....	.....	1	.....	1
Discharged	.....	.....	.....	.....	5	.....	5
Died	.....	.....	.....	1	.....	.....	1
Aggregate	1	2	.....	7	10	4	24

The following promotions were made: One colonel to be surgeon-general, with rank of brigadier-general; 5 lieutenant-colonels to be colonels; 8 majors to be lieutenant-colonels; 28 captains to be majors; 4 first lieutenants to be captains; 1 major's place remains to be filled by promotion.

Increased inducements to enter the Medical Corps, provided by the act to increase the efficiency of the Medical Department, approved April 23, 1908, and the recent increase in pay for the army at large have resulted in a considerable increase in the number of candidates appearing at the preliminary examinations for that corps. Before the approval of the act in question, recruiting for the Medical Corps was very disheartening work, as there was so little to offer prospective candidates in the way of pay and promotion. The year before the approval of this act but 10 physicians were obtained to attend the Army Medical School preliminary to being commissioned in the Medical Corps if they demonstrated their fitness therefor. Last year, after approval of the act cited above, 33 candidates were secured and 29 were finally commissioned as compared with 10 the previous year. Constant and systematic efforts to obtain candidates at the various centers of medical learning were responsible in part for this result; nor is it probable that at any future time will it be possible to get sufficient candidates for the Medical Corps except through similar efforts. The distinguished physicians who head the Medical Reserve Corps have been a potent factor in this result, many of them through the interest created by their being members of the army medical service interesting themselves in obtaining desirable candidates, principally from the medical schools and hospitals with which they are personally associated. In fact, if no other benefit resulted to the army from commissioning the leaders of the medical profession of the country in the Medical Reserve Corps, it is safe to say that the desirable candidates obtained by and through them demonstrates the wisdom of such action. While the increased number of candidates for the Medical Corps is extremely gratifying, the fact should not be overlooked that the number of medical officers in the service—310, including those found qualified but not yet commissioned—is still 12 below the number allowed under the old organization and 135 below the number allowed under the present law when the total increase is legally available, which will be in 1911. It is now apparent that the Medical Corps can not be filled by that date. In fact, to fill all of the vacancies which will be created by the following year will require nearly 60 approved candidates each year at the preliminary examinations for the next three years. To secure so many will require earnest and continued efforts.

It will be noticed that 24 medical officers have been lost during the year. This is double the number lost during the preceding year. This increase is also partly due to the act to increase the efficiency of the medical department. It will be noted that 5 captains have been discharged. At the last session of Congress an amendment to the act for the support of the army modified the law in reference to the promotion of majors of the Medical Corps to the grade of lieutenant-colonel. Now such officers are reexamined at the end of one year in case they fail at their first examination for promotion. If successful at the second examination they are promoted; if unsuccessful, retired, with the grade of major, and if found physically disqualified they are promoted and retired. Of 5 majors of the Medical Corps to which this law is at present applicable, 1 has already asked for retirement at the expiration of thirty years' service, 1 has been found physically disqualified and will be retired

with the next higher grade as soon as a vacancy occurs, and 1 has been found professionally disqualified and retired with the grade of major; the other 2 have not yet been examined. The effect of the act reorganizing the Medical Corps, in so far as it modified the method of examination for promotion and extended it to a higher grade, has put into operation an effective system of promotion by elimination which can not fail to be of the utmost value in increasing the efficiency of the corps.

MEDICAL RESERVE CORPS.

Appointed during year		391
Losses:		
Discharged	17	
Died	4	
Commissions vacated	6	
		27
On roster June 30, 1909		364

The four deaths were:

Julius A. Escobar, drowned, November 15, 1908, at Imus, Cavite, P. I.
Andrew J. McCosh, died December 2, 1908. (On inactive list.)
John M. Shepherd, died December 11, 1908, at Salt Lake City, Utah.
William F. Bull, died February 22, 1909. (On inactive list.)

Of the 364 on the roster June 30, 184 were on active duty and 180 on the inactive list.

Ordered to active duty during year		217
Relieved from active duty	10	
Commissions vacated	6	
Honorably discharged	15	
Died	2	
		33
On active duty June 30, 1909		184

As noted above, 29 successfully completed the course of study at the Army Medical School and were found qualified for appointment in the Medical Corps.

The hopes expressed in last year's report that the patriotism of numbers of distinguished physicians would operate to induce them to head the Medical Reserve Corps have been amply justified by the outcome. The list of these gentlemen, now on the inactive list of the Reserve Corps, contains many names which are well known in scientific circles throughout the world. As a practical example of the value of the services of these officers, it has been noted that when it was necessary to assemble a board to investigate the important subject of inoculation for typhoid fever it was possible to do so without going outside of the Medical Reserve Corps, while at the same time it is doubtful if a better qualified board could have been assembled in this or in any other country.

During the year, with very few exceptions, all officers of the Medical Corps and of the Medical Reserve Corps have performed their duties in a satisfactory manner.

CONTRACT SURGEONS.

In service June 30, 1908	179
Contracts made	27
	206
Contracts annulled	192
Remaining in service June 30, 1909	14

Four of these 14 are temporary contracts and 10 are on duty at arsenals and headquarters of military departments, at pay ranging from $75 to $150 per month.

The latter devote but a portion of their time to professional attendance on the army personnel at the places where they are employed. They are commissioned in the Medical Reserve Corps, but in the interests of the Government are employed and not placed on duty as officers. The 4 contract surgeons temporarily employed are at stations from which medical officers are temporarily absent. This can not always be avoided, with medical personnel at its present strength.

DENTAL SURGEONS.

Contracts authorized and in service June 30, 1908	31
Contracts made	3
	34
Contracts annulled	3
Remaining in service	31

The number of dental surgeons employed during the year has been the number allowed by law. This number has not, however, proved adequate to the present strength of the army, and it is quite certain that the present number of dental surgeons is inadequate except to furnish treatment of a temporary or first-aid character. The law authorizing the employment of dental surgeons names 1 to 1,000 of authorized strength as the maximum limit of number. The proportion of dental surgeons to the strength of the army at present is 1 to 2,740. The 31 dental surgeons of the army during the year 1908 treated 44,479 cases, being an average of 1,445 patients a year, or 4.6 for each working day. As a number of working days are spent in travel, the number actually treated each day is presumably somewhat larger.

All the bills introduced with reference to the dental service of the army have mentioned a proportion of 1 dental surgeon to 1,000 of authorized strength as a maximum limit of number. This would provide, at the present strength of the army, 85 dental surgeons, which would allow one at each post of four or more organizations in the army.

The most recent bill for dental surgeons in the navy provides 30, which is in the proportion of 1 for about 1,500. There is no doubt that the largest figure of 1 to 1,000 would be ample, and it is probable that the naval proportion, which would allow for the army 57, would meet the pressing needs of the service. To give each man in the service one treatment a year would require a corps of 60, and to ask for a sufficient number of dental surgeons to do this seems certainly not to err upon the side of extravagance. It is recommended that this number be allowed.

HOSPITAL CORPS.

At date of last report, June 30, 1908, the strength of the Hospital Corps was as follows:

Sergeants, first class	277
Sergeants	297
Corporals	17
Privates, first class	1,480
Privates	1,460
Total	3,531

Since then it has gained—

By enlistment	835
By transfer	699
Return from desertion	102

And lost during the same period—

By discharge by expiration of term of service	1,030
By discharge by order	175
By discharge, sentence general court-martial	123
By discharge, surgeon's certificate of disability	58
By transfer to line	67
By retirement	18
By death due to disease	16
By death due to suicide	2
By death due to drowning	2
By death due to accident	1
By desertion	213
Dropped	1

Leaving in service June 30, 1909—

Sergeants, first class	299
Sergeants	290
Corporals	18
Acting cooks	151
Privates, first class	1,358
Privates	1,345
Total	3,461

Total number of losses during year, 1,706; gain, 1,636.

In order to fill the vacancies existing in the grade of sergeant first class and to meet the needs of the service, examinations were held in the United States and in the Philippines Division in November and December, 1908. Of the candidates examined by the different boards 44 received the passing mark, 75 per cent. The result was gratifying in that 4 received over 90 per cent, 25 from 80 to 89, and 15 from 75 to 79 per cent. Forty-one of the successful candidates have been appointed sergeants first class.

All the available candidates for the position of sergeant that were on the eligible list at last report, June 30, 1909, have been appointed. Examinations were held during the fiscal year in the different military departments in the United States and in the Philippines Division, and it is expected that the successful candidates will receive their appointments soon after July 1, 1909, when vacancies for 50 additional sergeants provided for in the army appropriation act for 1909 and 1910 will become available.

The original vacancies for 30 additional corporals, created by aforementioned act, have been allotted to the different military depart-

ments and independent stations and privates recommended for them will be appointed on or soon after the 1st of July, 1909. From recommendations received, it is evident that medical officers appreciate the opportunity of being able to recommend men of long and faithful service and zealous attention to duty for promotion to the grade of corporal. Naturally many of the valuable men have not the technical knowledge which is required for the higher grades of noncommissioned officer.

In the early part of November, 1908, Company A, Hospital Corps, was transferred by direction of the Secretary of War from Camp Columbia, Cuba, to Fort D. A. Russell, Wyo., where quarters for a hospital corps company had been available for some time.

During the entire fiscal year Company B, Hospital Corps, has been stationed at the United States Army General Hospital, San Francisco, Cal.

Upon the return of the engineer troops from Cuba to Washington Barracks, D. C., it became imperative to find other quarters for Company C, Hospital Corps, and it was temporarily sent into camp at the Walter Reed United States Army General Hospital, Takoma Substation, Washington, D. C., where it remained until June 2, 1909, when it left for Fort Niagara, N. Y., for temporary station until quarters could be finished at the Walter Reed United States Army General Hospital. This will hardly be until late in 1909 or early in 1910.

Company D, Hospital Corps, is on duty in the Philippines Division and serves there as a base of supply for hospital corps personnel, as a company of instruction and as a unit for furnishing a complete field hospital outfit for active field service on a few hours' notice.

In fact, with a view to immediate availability for active service, all four hospital corps companies are so organized and administered, except so far as transportation is concerned, that they are able at a moment's notice to take the field fully equipped with a complete field-hospital outfit. As an illustration of the necessity for this preparedness, it may be well to refer back to the services rendered by Company A, Hospital Corps, at San Francisco, Cal., after the earthquake, and by a portion of Company C, Hospital Corps, in the State of Mississippi after the last hurricane. These services, it should be noted, could be efficiently performed without much demand being made for transportation, but it should be fully realized that if companies of instruction are to perform promptly the duties of field hospitals they must have their complete transportation at all times and not be compelled to have it collected from various points at a distance, as is now the case.

During 1908 Company C, Hospital Corps (divided into two sections), took part in the field exercises at Pine Camp, Pine Plains, Jefferson County, N. Y.; at Chickamauga Park, Ga.; Fort Benjamin Harrison, Ind.; Fort Riley, Kans.; and at the national match, Camp Perry, Ohio. One half of Company B, Hospital Corps, with field hospital No. 15, was on duty in July, 1908, at camp at Leon Springs, Tex., and at the camp at Fort D. A. Russell, Wyo. The other half was at American Lake, in the State of Washington, with field hospital No. 1, where it arrived within eighteen hours from the time it left San Francisco and was ready to receive patients. An ambulance section took part in all of these field exercises. The entire company

left San Francisco September 10 and marched to maneuver camp at Atascadero, Cal.—225½ miles—the men marching 24 miles on the last day, arriving at the camp in fine condition, carrying their full field equipment and blanket rolls. During their stay at this camp 120 cases were treated in the field hospital—of the Regular Army, 81; of the militia, 36; and 3 civilians. As a whole, the men performed their duties very well and the discipline was excellent.

Recruiting for the Hospital Corps was satisfactory during the greater part of the fiscal year, but in the last month, June, it became apparent that no more men could be accepted, in order not to exceed the authorized limit of strength—3,500. While the act of Congress approved March 3, 1909, increased the number of noncommissioned officers by 80 (50 sergeants and 30 corporals), thereby establishing a proper ratio—1 noncommissioned officer to 4 privates or 700 noncommissioned officers to 2,800 privates—for the corps, this naturally was at the expense of the number of privates, as the 80 for noncommissioned officers came from the 2,880 privates heretofore allowed. It may be readily seen that such a loss materially affected the working force of military hospitals, and as a consequence a great many applications for additional privates have been received. Under existing conditions, however, the department finds itself unable to furnish these men. It was probably assumed that the abandonment of some of the smaller posts and the consolidation of troops into larger posts would lessen the demand for privates of the Hospital Corps, but this has not proved to be the case, as the present modern hospital buildings with their numerous isolation wards, operating rooms, electrical appliances, and steam or hot water heating apparatus require a much greater number of Hospital Corps men than did the older hospitals, which in most cases were entirely without conveniences which are now considered essential. Moreover, the army as a whole has been notably increased in strength without a proportionate increase in privates, Hospital Corps. This condition has already been brought to the attention of higher authority by this office, but it is understood that it is not practicable to afford relief at the present time. With the same object in view, the estimates for the Hospital Corps for the fiscal year 1910–11 have been increased to include 500 additional privates. It is hoped that as soon as an opportunity affords, this increase may be obtained. Maintaining the same proportionate number of hospital privates previously allowed to the strength of the army will only give the sick and wounded the care and attention to which they are accustomed and to which it is believed they are justly entitled.

It will be noted that transfers from the Hospital Corps to the line number 67 this year as compared with 36 last year. In short, nearly twice as many men have been transferred from the Hospital Corps to the line. This question was discussed at some length in last year's report, and these figures establish the fact that with the increased inducements presented by the line, transfers from the Hospital Corps to the line are likely to increase. It may be that this is not a suitable time to urge an increase in pay for the Hospital Corps, but in all justice to that corps attention must be invited to the fact that in the bill increasing the pay of the army its increase was an inadequate one, besides being very small as compared with the line of the army. As noted above, this has not yet seriously affected the Hospital Corps

so far as quantity is concerned, but it is believed that this is not so true in reference to quality. Certainly the men transferred have been a distinct loss on account of their generally high character and attainments.

Private First Class James Brody, Hospital Corps, was highly commended in a communication of September 27, 1908, by the officers and passengers of the steamship *Northwestern*, on her trip from Seattle to Nome, for his "prompt, gratuitous, continuous, and efficient service rendered the sick passengers"—no doctor being then aboard that vessel.

THE NURSE CORPS.

During the present year 501 nurses applied for admission to the Army Nurse Corps. There were 25 discharges and 36 appointments, one of the latter having had previous service in the army. One death occurred. On June 30, 1909, there were 91 nurses in the corps, distributed as follows:

General Hospital, San Francisco, Cal.	39
General Hospital, Fort Bayard, N. Mex.	19
	58
Philippines Division:	
Division Hospital, Manila	18
Iloilo	2
Zamboanga	5
Camp Keithley	2
Fort William McKinley	4
En route from United States	2
	33

Comparison with conditions at the end of the last fiscal year shows an increase of 112 applications and of 10 appointments during the year at present under discussion. But 6 names now appear on the eligible list.

Little can be added to the rather exhaustive statement made on the subject of the Army Nurse Corps in last year's report. Though there has been a slight increase in numbers, it is no less evident, as stated last year, that the rewards in the Army Nurse Corps must be increased if a sufficient number of desirable candidates are to be obtained. Nothing has been done in this direction during the year, except that laundry has been provided for the uniforms of nurses worn in the hospital wards. In fact, this is all that can be done under the present law, except that a probationary school might be established. An appropriation has been asked for the construction of quarters for nurses at the Walter Reed General Hospital. Giving nurses on appointment a short service here (with discharge if such service was not satisfactory), under the direct observation and supervision of the superintendent, would, perhaps, do more to increase the efficiency of the Army Nurse Corps than anything permissible under the present law. This would also effect a considerable saving to the Government, as it would prevent the furnishing of expensive transportation until after a nurse had shown conclusively that she was fitted for the military service. The recommendations of last year are equally pertinent at present. Those which have not been already discussed are as follows:

1. The per diem allowance of 30 cents for the subsistence of nurses be increased to 50 cents.
2. Recognition of long and faithful service by an increase in the pay of nurses of 10 per cent for every five years of service, the maximum to be reached in fifteen years; this provision to be retroactive.
3. Cumulative leave for a period not to exceed three months.

Mrs. Dita H. Kinney, who has served as superintendent of the Army Nurse Corps since January 1, 1901, proffered her resignation to take effect July 31, 1909.

ARMY MEDICAL SCHOOL.

The thirteenth session began October 1, 1908, and closed May 29, 1909.

The number of accepted candidates, appointed first lieutenants in the Medical Reserve Corps and admitted to the school, was 33, and of medical officers of the militia, 1.

This large increase in the number of student candidates over that of former years shows the immediate effect of the much brighter prospects now opened out in the army to young graduates from our best medical schools by the "act to increase the efficiency of the Medical Department of the United States Army," approved April 23, 1908.

It is to be regretted that so few medical officers of the militia are able to avail themselves of the benefit of the school. The conditions of admission (under provisions of G. O., No. 139, 1905, and G. O., No. 134, 1907) have been made as easy as possible, and their failure to present themselves depends upon causes for which no remedy can be suggested.

The 33 candidates completed the course; 29 passed their final examination successfully and were awarded certificates of proficiency; 4 failed to pass the examination. The medical officer of the militia completed the course but did not pass the examination.

The following table shows the subjects taught, the hours of instruction in each subject, and the names of the instructors:

No.	Hours.	Subject.	Instructor.	Maximum.	Minimum.
1	112	Duties of medical officers, medical department administration and customs of the service.	Lieut. Col. Wm. H. Arthur, and Capt. Chas. R. Reynolds.	1,000	800
2	280	Clinical microscopy and bacteriology	Maj. F. F. Russell	900	720
3	25	Military hygiene	Col. V. Havard	800	640
4	22	Military surgery	Maj. F. A. Winter	800	640
5	24	Military and tropical medicine	Lieut. Col. W. D. McCaw	800	640
6	170	Sanitary chemistry	Maj. C. R. Darnall	600	480
7	58	Hospital corps drill and field work	Capt. Chas. R. Reynolds	500	400
8	24	Operative surgery	Capt. H. F. Pipes	400	320
9	52	Ophthalmology and optometry	Lieut. Col. W. D. Crosby	400	320
10	10	Roentgen-ray work	Capt. H. F. Pipes	300	240

In addition to the above the following instruction was also given:

Twenty hours in equitation at Fort Myer, Va., by Second Lieut. Richard D. Newmann, Thirteenth Cavalry, and Capt. Frederick B. Hennessy, Third Field Artillery.

A series of 7 lectures on military law by Gen. Geo. B. Davis, Judge Advocate General, U. S. Army, and Maj. John B. Porter, Judge Advocate General's Department.

A series of 6 lectures on insanity at the Government Hospital for the Insane, by Dr. Wm. A. White.

A series of lectures and demonstrations on mosquitoes by Dr. C. S. Ludlow.

A lecture on "Map reading" at the Army War College, by Capt. R. H. Van Deman, General Staff.

The class also attended a series of surgical clinics at the United States Army General Hospital, by Lieut. Col. Wm. H. Arthur.

The final examination began May 7 and ended May 14, 1909.

Four of the student candidates have obtained a general average of more than 90 per cent of all possible marks, and are borne on the roll as "proficient with honor."

The Hoff memorial medal for the highest standing in the class was awarded to Lieut. Henry C. Coburn, jr., Medical Reserve Corps.

The conduct and deportment of the members of the class were at all times excellent.

The supplementary clinical examination was held from May 17 to May 22, and was successfully passed by the 29 graduates. Having also been found to possess satisfactory aptitude for the military service, they were all accordingly recommended for appointment in the Medical Corps.

The closing exercises took place in the Continental Hall of the Daughters of the American Revolution on May 29, the address to the graduates being delivered by Dr. Roswell Park, of Buffalo, the diplomas awarded by the honorable the Secretary of War, and the Hoff memorial medal by Gen. J. Franklin Bell, Chief of Staff.

Relative proficiency of the graduates of the Army Medical School, session 1908–9.

First lieutenants, Medical Reserve Corps.	Aggregate (maximum 7,000, minimum 5,600).	Remarks.
Rozier C. Bayly	5,667	
Daniel P. Card	6,252	
Henry C. Coburn, jr	6,414	Honor graduate and medalist.
Addison D. Davis	5,762	
William R. Dear	6,304	Honor graduate.
Charles E. Doerr	6,176	
Lee R. Dunbar	5,979	
Clarence E. Fronk	5,650	
Leon C. Garcia	5,787	
Ralph D. Goldthwaite	6,256	
Daniel W. Harmon	6,231	
George D. Heath, jr	5,731	
Eben C. Hill	6,118	
Robert W. Kerr	5,799	
Thomas J. Leary	6,045	
Norman L. McDiarmid	6,271	
George H. McLellan	6,079	
James C. Magee	6,102	
Armin Mueller	6,114	
Alexander D. Parce	6,007	
William S. Shields	6,116	
William H. Smith	5,759	
Corydon G. Snow	6,308	Honor graduate.
Morrison C. Stayer	6,023	
Clarence A. Treuholtz	6,214	
Arnold D. Tuttle	6,411	Honor graduate.
John B. H. Waring	6,064	
James A. Wilson	6,032	
Frederick S. Wright	6,059	

Maj. John T. O'Ferrall, surgeon, Mississippi National Guard, also attended this session of the school.

SPECIAL SANITARY WORK OF MEDICAL OFFICERS.

During the year 1908 medical officers of the army have been in charge of sanitary matters connected with two great enterprises in which the Government is engaged and which are administered through the War Department, namely, the construction of the Panama Canal and the government of intervention in Cuba. Col. William C. Gorgas, who has been chief sanitary officer of Panama since 1904, is assisted by five other medical officers of the army—Lieut. Col. John L. Phillips, Maj. Charles F. Mason, Maj. Theodore C. Lyster, Capt. Robert E. Noble, and Capt. George H. Crabtree. The sanitary work on the Isthmus is most creditable to the nation as well as to those engaged in it. The death rate among the population of the Canal Zone has diminished 50 per cent in three years and now is less than that of many of the cities in the Gulf States. The death rate for disease among white American employees, 3.84, approximates that of the army. It has been more than three years since a case of yellow fever or plague developed on the Isthmus.

Sanitary affairs in Cuba have been during the period of intervention under the administrative control of Maj. J. R. Kean, Medical Corps, assisted by four medical officers detailed from the army of Cuban pacification, viz, Maj. P. C. Fauntleroy, Maj. J. R. Church, and Capts. John H. Allen and Henry D. Thomason. Capt. J. L. Bevans was also assigned to duty with the provisional government in connection with the administration of hospitals and charitable institutions. The intervention in September, 1906, found the sanitary administration of the Cuban cities outside of Havana in a state of great neglect, due to lack of funds and of proper organization and methods. Yellow fever had also been reintroduced into the island and had spread widely into the small towns and sugar centrals of the interior, differing in this respect from its former habit of clinging to the larger seaport towns. This change of behavior was due to the great increase in the number of nonimmunes among the country population and to the increased facilities for travel. The methods of combating the disease formerly devised by Gorgas for Havana were extended to other foci of infection and modified to suit changed conditions. Political conditions required the distribution of the American troops in the various cities, where they were much exposed to this infection; yet so perfect was the cooperation between the medical service of the army and the sanitary authorities that outbreaks of yellow fever among our soldiers have been few and promptly checked. Since February 18, 1908, there has been no case of yellow fever in the whole island west of Santiago, except one mysterious case in Havana in September, and the outbreak in the extreme eastern end of the island was easily controlled. Yet the freedom of all Cuba except the most eastern of the six provinces from the disease throughout the summer did not save the island from a blanket quarantine by the United States, and this in spite of an international sanitary treaty to which both nations are parties, which provides among other things for the localization of quarantines.

The termination of the provisional government on January 28, 1909, left the island entirely free from yellow fever, and it has so remained. The sanitary department was also completely reorganized, and the quarantine service and department of charities consoli-

dated with it into a department of health and charities, at the head of which is a secretary, who is a member of the cabinet. The sanitary service of all municipalities was nationalized by being placed in charge of sanitary officers appointed by the President. The expenses of the municipal sanitary services are paid from the national treasury, and each municipality, in consideration thereof, pays into the treasury one-tenth of its income. Uniformity of method of administration and adequate financial support being secured by the admirable sanitary law promulgated by the provisional governor, the Republic of Cuba has in sanitary administration advanced to the front rank among the nations.

Among the professional activities of medical officers which will contribute materially toward the diffusion of sanitary knowledge in the army should be mentioned two excellent works on military hygiene, which have been written during the year. A Manual of Military Hygiene, by Col. Valery Havard, president of the Army Medical School, applies in a practical manner for military use the latest advances in preventive medicine and the results of the author's wide experience during thirty-eight years of service. The Elements of Military Hygiene, by Maj. Percy M. Ashburn, a small treatise, written in an attractive style for nonprofessional readers, will be a valuable addition to the working library of line officers.

Capt. Charles F. Craig has written an elaborate work upon the malarial fevers, embodying much original work, and brings the literature in English of this important disease up to date.

Maj. Charles Lynch has written for the use of the American Red Cross a text-book on first-aid and relief columns. Maj. Charles F. Mason has published a second and enlarged edition of his Handbook for the Hospital Corps, which is used as a text-book for the instruction of the enlisted men of the Hospital Corps in the United States Army and the organized militia.

During the year the Post Graduate School and Hospital, New York City, extended the privileges of the school to all medical officers of the army, and by mutual agreement at the same time a medical officer, in addition to other duty, was assigned to the school as instructor in tropical medicine. This arrangement has proved of great mutual benefit.

The department is also much indebted to Dr. W. M. Park, director of the research laboratory of the New York department of health, for courtesies extended to army medical officers at that laboratory.

UNITED STATES ARMY GENERAL HOSPITALS.

SAN FRANCISCO, CAL.

This hospital is used as a base hospital for the Philippines and Hawaii and is the largest of the army general hospitals, excluding the hospital for tuberculosis at Ford Bayard.

The number of cases treated during the year was 2,293, being an increase of 377 over the preceding year. The daily average of patients for the year was 244. There were 48 deaths during the year; the largest number from any one disease being 6 from pneumonia. There were 167 discharges on surgeon's certificate of disability. The largest number from any one cause was 10 for flat foot. Next came 6 each for syphilis and gonorrhea, including gonorrheal rheumatism.

The following table shows the movement of the sick, together with the principal causes of admission during the calendar year of 1908, civilians being included:

Numerical statement of admissions and dispositions.

	From—		Total.
	Philippine Islands.	United States.	
Remaining in hospital December 31, 1907	55	211	266
Admissions:			
For gunshot wounds	2	9	11
Diarrhea and dysentery	30	41	71
Malarial fevers	4	8	12
Typhoid fever	2	6	8
Rheumatic affections	4	50	54
Venereal diseases	17	501	518
Injuries	30	263	293
Insanity	40	17	57
Alcoholism	1	72	73
All other causes	204	992	1,196
Total admissions during the year	334	1,959	2,293
Total admissions to be accounted for	389	2,170	2,559
Dispositions:			
Total returned to duty	98	1,414	1,512
Discharged for disability	90	77	167
Discharged per expiration of term	27	18	45
Deaths from all causes	7	41	48
Deserted	3	12	15
Transferred to Hot Springs, Ark	5	6	11
Transferred to Fort Bayard, N. Mex	67	11	78
Transferred to Government Hospital for Insane	6	9	15
Transferred to other hospitals	0	4	4
Otherwise disposed of	41	411	452
Total dispositions during the year	344	2,003	2,347
Remaining in hospital December 31, 1908	45	167	212

An active surgical clinic is maintained at this hospital, the following being a condensed tabular statement of the principal operations performed:

Ophthalmitis	1
Mastoiditis	4
Hemiplegia, traumatic origin	1
Deflected nasal septum	2
Empyema	6
Abscess of liver	2
Appendicitis	26
Stab wound, abdomen	1
Gunshot wound, abdomen	1
General peritonitis	1
Hernia	10
Fistula following an appendicostomy	1
Fistula in ano	2
Hemorrhoids	18
Undescended testicle	2
Varicocele	11
Hydrocele	2
Stricture of urethra	1
Adenitis	2
Tubercular glands	1
Epithelioma lip	1
Hypertrophy of breast	1
Osteo-sarcoma tibia	1
Osteo-myelitis	2

Rupture tendon adductor longus	1
Sciatica	1
Fracture of—	
Skull	1
Lower jaw	2
Clavicle	1
Humerus	1
Femur	1
Tibia	1
Hammer toe	3
Hallux valgus	1
Bursitis tendo-Achilles	1
Exostosis	1
Bunion	1

The mean strength of the personnel on duty at this hospital for the year was 8 officers and 169 enlisted men of the Hospital Corps. Company B, Hospital Corps, was also stationed at this hospital with a mean strength of 2 officers and 111 enlisted men.

FORT BAYARD, N. MEX.

This hospital, which is intended for the treatment of cases of pulmonary tuberculosis in the army, was commanded during the year by Lieut. Col. George E. Bushnell, Medical Corps.

A new administration building is in process of erection. This will provide accommodations for the offices of the commanding officer, adjutant, and quartermaster, as well as for the telephone and telegraph offices and the post-office. An appropriation has been made by Congress for seven double sets and one single set of officer's quarters and for quarters for the nurses belonging to the Army Nurse Corps, but work upon these buildings has not yet commenced. A new storehouse for medical property has also been authorized.

The number of tuberculous cases under treatment December 31, 1907, was 255; on December 31, 1908, 288. The total number of cases of tuberculosis treated during the year was 623, of which 618 were cases of pulmonary tuberculous. Nine other cases were sent to this hospital with the diagnosis of tuberculosis which were found to be nontuberculous. Of these, 2 had syphilis, 1 aneurism of the aorta, 1 abscess of the liver, 1 neurasthenia, 1 lymphatic leukæmia, 1 pernicious anæmia, 1 fibrinous bronchitis, and 1 mitral stenosis. In addition 2 nontuberculous cases with pulmonary involvement were admitted for treatment and were discharged apparently cured, one being a case of pulmonary oidiomycosis, the other a case of subphrenic abscess secondary to suppurative appendicitis.

The results in the treatment of pulmonary tuberculosis are given in the following table, which comprises all cases of this disease which were under treatment in 1908:

Class.	Number.	Apparently cured.		Arrested.		Improved.		Unimproved.		Died.	
		Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
Incipient	85	14	16.47	23	27.06	29	34.12	17	20.00	2	2.35
Moderately advanced	338	17	5.03	61	18.05	148	43.79	99	29.29	13	3.84
Far advanced	192	.....	.....	8	4.16	60	31.25	84	43.75	40	20.84
Acute miliary	3	.....	.....	.....	.....	.....	.....	.....	.....	3	100.00
Total	618	31	5.01	92	14.89	237	38.35	200	32.36	58	9.39

THE WALTER REED UNITED STATES ARMY GENERAL HOSPITAL, TAKOMA PARK, WASHINGTON, D. C.

This table includes 23 cases that were under observation less than two weeks in which no result was recorded and which consequently were marked unimproved. One case "apparently cured" and 1 case "arrested" on admission are also included. Of the 58 deaths, 4 were not due to tuberculosis; 1 death occurred from appendicitis, 2 from abscess of liver, and 1 occurred outside of the hospital from acute alcoholism.

The following table shows the results obtained in the treatment of cases of pulmonary tuberculosis under observation for six months or more:

Class.	Number.	Apparently cured.		Arrested.		Improved.		Unimproved.		Died.	
		Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
Incipient	68	13	19.12	20	29.41	25	36.76	10	14.70	.....	.....
Moderately advanced	170	11	6.47	48	28.23	72	42.35	37	21.77	2	1.18
Far advanced	75	.....	.....	8	10.67	18	24.00	41	54.66	8	10.67
Total	313	24	7.67	76	24.28	115	36.74	88	28.11	10	3.20

Sixty deaths occurred during the year, of which 58 were due to tuberculosis, or occurred in tuberculous subjects, and 2 resulted from other diseases, 1 being due to mitral stenosis and 1 to lymphatic leukæmia.

The following table shows the duration of treatment at this hospital of all tuberculous cases which terminated fatally during the year, including 1 patient who died outside of the hospital:

	Weeks.				Months.			Years.			Total.
	1.	2.	3.	4.	2.	3–6.	7–12.	2.	3.	4.[a]	
Time of death of 37 cases under continuous treatment	1	5	1	4	7	10	8	1	.....	.....	37
Time of death of 21 cases not under continuous treatment:											
(*a*) Reckoned from last admission	7	.....	.....	5	2	4	3	.....	.....	.....	21
(*b*) Reckoned from original admission	.....	.....	.....	.....	.....	.....	3	7	5	6	
Total	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	58

[a] Four years or more.

WASHINGTON, D. C.

During the calendar year 1908 this hospital continued to occupy the old and inadequate buildings constituting the post hospital at Washington Barracks while awaiting the completion of the new hospital on land purchased on Brightwood (now Georgia) avenue, in the northern part of the city. This hospital served as a post hospital for Washington Barracks during the year. The total number of cases admitted were 760, of which 393 were medical, 285 surgical, and 109 venereal. The number of officers on the active list admitted to the hospital was 47, of which 9 remained on treatment at the end of the year. Ten retired officers were also admitted and 22 retired soldiers. Ten civilians were also admitted during the year. There were 22 discharges on surgeon's certificate of disability during the year and 16

deaths. Sixty-eight major operations were performed during the year and 55 minor operations. Among the major operations were appendectomy, 10; appendicostomy, 2; amputation, middle third, right leg, 1; choldeochostomy, 1; herniotomy, 20; laparotomy, 4; nephrectomy, 1.

General Orders, No. 70, War Department, April 14, 1909, ordered the discontinuance of this hospital as a general hospital and the opening of the new hospital under the name of the Walter Reed United States Army General Hospital. It was afterwards designated to serve as the post hospital for Washington Barracks, patients requiring bed treatment being authorized to be transferred to it without authorization from higher authority. They are transported by a steam automobile ambulance, and this arrangement is believed to have given a satisfactory hospital service. The new hospital is a handsome and commodious structure, and both well planned and well constructed. It will accommodate 80 patients. Limited accommodations are provided for the care of women connected with the army requiring hospital treatment or surgical operation. There is at present no accommodation for female nurses, but an estimate for a building for this purpose has been approved by the Secretary of War. All of the necessary auxiliary buildings have not yet been provided, but a hospital corps barrack, two sets of officers' quarters, a stable, and storehouse are now under construction. The construction of quarters for the commanding officer and other officers connected with this institution are very necessary, and estimates therefor will be approved by higher authority. It is also desirable to secure additional ground, about 18 acres, so as to make the plot owned by the Government an approximate rectangle instead of an irregular rhomboid, as at present. This will give the hospital an opening on the Fourteenth street extension, and would secure the best and highest ground in the city, besides making it possible to avoid the crowding of the buildings in the northeast corner of the plot. It would also make it possible to keep out of sight from the main street the necessary administrative buildings, such as stables, storehouses, power house, etc., and would allow space for a hospital garden, dairy, and laundry. It is interesting to note in connection with the completion of this hospital that the construction of a general hospital at Washington was recommended by Surgeon-General Hammond in 1862.

ARMY AND NAVY GENERAL HOSPITAL, HOT SPRINGS, ARK.

This hospital is intended especially for patients having diseases in which hydrotherapeutic treatment is indicated.

The movement of the sick during the year 1908 at this hospital is shown in the following table, which includes retired and discharged soldiers of the Army and Navy, both Regular and Volunteer, as well as those on the active list:

Remaining December 31, 1907	87
Admitted	743
Discharged from hospital (duty)	689
Discharged from service for disability	14
Died	8
Transferred to other hospitals	7
Otherwise disposed of	2
Aggregate treated in hospital	830
Remaining December 31, 1908	99

Included in the above statement are 30 officers of the army and 2 of the navy on the active list, and 14 retired officers, including 1 from the navy.

The causes of admission were in general:

Epidemic diseases	4
General diseases	227
Diseases of the—	
Nervous system	138
Eye	1
Circulatory system	24
Respiratory system	8
Digestive system	86
Genito-urinary system	75
Skin and cellular tissue	45
Organs of locomotion	197
Other diseases	14
Injuries	11
Total	830

Among the general diseases are included 186 cases of acute and chronic rheumatism.

This hospital has during the year been commanded by Maj. George D. Deshon, Medical Corps.

The present facilities of this hospital for the treatment of officers and men on the active list of the army and navy are ample, and no increase in accommodations on their account is needed, except that one double set of lieutenant's quarters of the latest pattern should be provided for the junior medical officers on duty here. This requirement is imperative and immediate, being in the interest of economy, good service, and good discipline.

The number of ex-soldiers and ex-sailors who come here for treatment during the winter has grown to such an extent as to make it necessary either to formulate some means of curtailment or to enlarge the capacity of the hospital.

In 1901 veteran patients were first admitted. The following table shows the daily average of such patients since that date during the months of March and August, these months being selected because in March the season here is at its height and the number of patients in this hospital is at the maximum, while in August the heat is the most intense and the number of patients is at the minimum.

Daily average of patients (veterans) in hospital.

	1901.	1902.	1903.	1904.	1905.	1906.	1907.	1908.[a]
March	21	24	34	47	40	46	43	75
August	7	19	22	27	37	25	32	43

[a] To date.

From this it will be seen that there is a steadily increasing demand for admission from this class of patients, that during the crowded portion of the past season their number was 60 per cent higher than the previous maximum, and that during the present month when the number of patients is at the lowest ebb of the year their number is 16 per cent higher than the previous low-month maximum.

Until recently this institution has been little known among veterans, but this condition is rapidly changing. Each old soldier return-

ing from here to his home becomes a center of dissemination of information concerning Hot Springs and the facilities for treatment offered by the Government to ex-soldiers, and before many months several other veterans from the same neighborhood apply for admission. They are surprised to find that they can obtain board, lodging, baths, medicines, nursing, and the professional services of medical officers of the army for 40 cents per day. To most of them this is cheaper than staying at home.

The veterans of the civil war are being rapidly overtaken by the infirmities of age, and each year will find a relatively larger proportion of them in need of hospital treatment.

The number of soldiers of the Spanish-American war who come here as patients is also constantly increasing. It seems probable that when the number of civil war patients diminishes it will be fully compensated for by the increased admissions from those who have served in the Spanish-American and later campaigns.

This last winter the hospital was full and overflowing, so that on several occasions veteran patients arriving from the North were obliged to wait several days for vacancies.

The hospital has 122 beds. Of these 14 are in private rooms and intended for sick officers, and 108 are in four wards. One ward is occupied by soldiers now in the service of the United States and the other three wards by veterans.

By the proposed enlargement the War Department would acquire possession of a fully equipped general hospital centrally located (particularly in the event of the Mississippi waterway improvement) and of sufficient size to be of considerable value as a reserve hospital in time of war.

For the reasons above given it is recommended that one new 48-bed, two-story ward be erected at once and that a second story be added to the present north and south wards. This would double the present ward capacity, giving a total of 216 beds in the wards.

Later on additional wards of two stories each could be built as needed.

The present mess hall can be doubled in capacity by installing dumb waiters and utilizing as an additional dining room the second story, which is now occupied as a dormitory for the hospital corps. This would necessitate building a barrack for the hospital corps sufficiently large for one company with its own separate mess. At present the hospital corps eat with the patients. Advantage to all concerned would result from separation. The proposed plan would also permit the serving of full-diet patients in one room and diabetics, Bright's cases, and special diets in another room.

The bath house should be extended at both ends so as to double its present capacity.

The power house should be extended to the north sufficiently to furnish the additional heat, light, and power needed for a greater plant.

A gymnasium should be built with specially devised apparatus for the mechanical treatment of ankyloses, adhesions, and deposits.

Any extensive enlargement of the hospital would necessitate occupying all of the administration building for administrative purposes. This would make it necessary to find other accommodations for the officer patients who are now quartered in private rooms in that building. For this purpose a building should be erected large enough to contain a 24-bed ward, 6 private rooms, a reading room, a dining

room, kitchen, servants' rooms, and a bath equipped with all special apparatus needed in hydrotherapy.

The commanding officer states that a comfortably furnished private room with heat, light, and good attendance, all free and located at a popular winter resort, is very prone to cause officer patients to magnify trivial ailments and seek to prolong their stay unnecessarily and unreasonably. This evil would be minimized by placing officer patients in a ward where they could be kept under more perfect observation and control.

All young officers should be placed in the ward. A few private rooms should be provided for serious cases and for older officers of high rank. The advantages of a mess for sick officers are too obvious to need explanation. At present officers who are too sick to be out are served their meals in their rooms. All others obtain their food outside the hospital wherever fancy leads them, which is sometimes disastrous.

A second observation alluded to above is the large number of cases of syphilis in its secondary and tertiary manifestations which come here under faulty diagnosis and which after a few weeks' treatment with massive doses of iodide of potash and mercurial inunctions are returned to their stations fit for duty and apparently cured. In view of this seeming not uncommon inability of medical officers to recognize and properly treat these cases, the thought occurs that it might be well to relax somewhat the present regulations which prohibit such cases from entering the hospital. Properly selected cases might be authorized to come here at their own expense. Were this done it would result in doubling the number of soldier patients now here and necessitate a separate venereal ward for their accommodation and isolation.

The estimated cost of the proposed construction is about $400,000. There is sufficient ground belonging to this hospital so that the above buildings can be conveniently arranged and yet sufficiently separated to avoid danger in case of fire, but this ground is very irregular and the cost of cutting and filling would be considerable.

The land lying to the north of the hospital, and now the property of the Interior Department, is level and if it could be obtained would reduce the cost of building.

PROVIDENCE HOSPITAL.

The act approved May 27, 1908, having appropriated $19,000 for the support and medical treatment of destitute patients in the city of Washington, D. C., under a contract to be made with Providence Hospital by the Surgeon-General of the Army, the relief afforded was as follows:

Patients in hospital July 1, 1908	97
Admitted during the year	1,227
Total number treated	1,324
Average number admitted per month	110
Number remaining in hospital June 30, 1909	105
Total number of days' treatment afforded	36,727
Average number of days' treatment per patient	28
Average number of patients treated per day	100
Longest term treatment (days)	279
Shortest term treatment (days)	1
Number of patients in hospital during the whole year	None.

CONSTRUCTION AND REPAIR OF HOSPITALS.

During the past fiscal year plans and specifications were prepared in this office for new hospitals to be erected at Boise Barracks, Idaho, and Fort Crockett, Tex.; also for isolation hospitals to be erected at Fort Leavenworth, Kans., Fort Riley, Kans., and Fort Slocum, N. Y. Plans and specifications were also prepared for enlarging the hospitals at Fort Brady, Mich.; Fort Crook, Nebr., Fort D. A. Russell, Wyo., Jefferson Barracks, Mo., Fort Leavenworth, Kans., Fort Logan, Colo., Fort Omaha, Nebr., Fort Robinson, Nebr., Fort Sam Houston, Tex., Fort Sheridan, Ill., Fort Slocum, N. Y., Fort Snelling, Minn., Fort Williams, Me., and Fort Worden, Wash.; also for improvements required for the hospital at Columbus Barracks, Ohio, and for the Walter Reed Army General Hospital, District of Columbia. Sketch plans were also prepared for a pavilion ward, to be constructed of concrete, for insane patients at the United States Army General Hospital, San Francisco, Cal., and for enlarging the hospital at Fort Shafter, Hawaii.

Contracts were entered into for the erection of the new hospitals, including the isolation hospitals, also for some of the additions and improvements, including a storehouse, for the United States Army General Hospital, Fort Bayard, N. Mex. Some of these additions and improvements have been completed, others are in course of erection, and some are in the market for proposals, as they pertain to the appropriation for the next fiscal year. The entire work is progressing in a satisfactory manner, and it is believed that the whole will be under contract in the near future.

Under a special appropriation, buildings are being erected at the United States Army General Hospital, Fort Bayard, N. Mex., consisting of quarters for 20 army nurses, a laundry building, and three double sets of quarters for officers. The construction of other buildings is also contemplated for this general hospital, the cost of which is to be paid from the same special appropriation.

At the Walter Reed Army General Hospital, District of Columbia, the following buildings are in course of erection: One hospital corps barrack building, two single sets of officers' quarters, a storehouse, a stable and wagon shed, also a shed and garage, all of which are being paid for from appropriations made for the Quartermaster's Department. This general hospital was occupied April 30, 1909, and the old hospital at Washington Barracks was turned over to the post authorities, but it is unsuitable for the needs of the garrison at that post and will have to be removed before the barrack building, which is partly erected, can be completed. A new hospital is not needed, as the sick of the command requiring hospital treatment are cared for at the Walter Reed General Hospital, but a small building for dispensary purposes is necessary.

A special appropriation of $60,000 was made by Congress to erect a new and modern hospital at San Juan, Porto Rico, and was reappropriated for use during the fiscal year, but was not needed, as the War Department, in an exchange of property with the insular government, secured a building which has been used as a military hospital for more than one hundred years. This hospital is a massive rubble structure of brick, stone, and mortar, occupying the western half of the block which faces the infantry barracks, and with an expenditure of about $10,000 it can be placed in first-class condition.

An allotment of $50,000 was made from the appropriation for construction and repair of hospitals for use in the Philippines Division during the fiscal year, and an allotment of $12,000 was also made from the appropriation for quarters for hospital stewards to cover the cost of quarters for hospital corps sergeants, first class, in the same division. So far as known at this time, these allotments were ample for the purposes.

In addition to the foregoing, the hospitals at military posts already established and occupied were improved or kept in proper repair, so far as funds would permit. The Army and Navy General Hospital, Hot Springs, Ark., was also provided for, but this hospital needs additional buildings and ground to meet the increased demands being made for accommodations. The following improvements are considered necessary for this general hospital:

One officers' ward building, one officers' bath house, one officers' mess hall, one double set of officers' quarters, one two-story veterans' ward, one additional story on each of wards Nos. 4 and 5, one medical and physical gymnasium, one hospital corps barrack building, one double set of hospital corps sergeants' quarters, an addition to the power house; also roads, walks, and grading, together with the necessary plans, surveys, etc. These improvements are estimated to cost $350,000, and effort is being made to secure additional ground from the Department of the Interior.

In connection with an estimate submitted for new plumbing fixtures desired for the Army and Navy General Hospital, to replace unserviceable fixtures which became clogged by a deposit from the water, it was found by an analysis made in this office that the deposit was soluble in a solution of muriatic acid, and a practical test developed the fact that porcelain plumbing fixtures immersed in a 20 per cent solution of the above-named acid for forty-eight hours cleansed them entirely, while lead and iron pipes, similarly clogged, immersed in the same solution for twelve hours were thoroughly freed from the deposit without apparent injury.

Numerous military posts require new hospital buildings to replace old and dilapidated structures which have been in use for many years, and which require large sums of money annually for repairs or improvements. New structures of a modern type would be economical, but it is not possible to erect a suitable modern hospital at any military post for the maximum sum allowed by law for such purpose. Section No. 1136, Revised Statutes of the United States, limits the cost of permanent structures to $20,000, unless special authority be first obtained from Congress. This law was enacted in 1853, when material and labor were much lower in price than they are at present, and it is thought that this statute should be modified to suit the changed conditions.

New and improved hospitals should be erected at the following military posts in the near future:

Fort McPherson, Ga.—The hospital at this post is entirely inadequate, is located in close proximity to a railroad, has no cellar, except a small excavation for a heating apparatus which was made some years after the building was erected. The heating and ventilation are not suitable for a modern hospital. The plumbing is crude, and effort has been made from time to time to improve it, but it is

far from being in compliance with modern sanitary requirements. The operating room is located in a small annex and adjoins a small laboratory. There is no instrument room, no etherizing room, no preparation or recovery rooms, and no surgical ward. There is no suitable ward for the isolation of contagious diseases, and no prison ward, and the hospital corps detachment is quartered in an old temporary wooden building which was erected for use during the Spanish-American war. The mess room and kitchen are too small, and are unsuited for their purposes, it being necessary to set tables two or three times to accommodate the inmates, and the entire hospital is such that it would be in the interest of economy to replace it with a modern structure. A hospital of sufficient capacity should contain 87 beds for patients and attendants, and the estimated cost of such a building is $90,000.

Fort Missoula, Mont.—This post has a provisional hospital of wood and it was erected in 1878. It is entirely devoid of modern appliances, and it would be a waste of funds to undertake to improve it. A regimental post is in course of erection at this fort, and a new modern hospital of sufficient capacity is a necessity which should be supplied. A suitable hospital should have accommodations for 60 patients, 22 hospital corps privates, and 5 noncommissioned officers, and the estimated cost of such a building is $90,000.

Post of Washington Barracks, District of Columbia.—This is an engineer post in connection with the Army War College. A small hospital was erected at this station in 1893, became a general hospital in 1898, was abandoned as such on completion of the Walter Reed Army General Hospital in 1909, and is to be torn down for the purpose of securing room to complete a barrack building which is partly erected. Some provision should be made for sick call, administration purposes, and for the temporary care of the sick at this post, and it is believed that a central infirmary with one small ward, a receiving room, office, etc., to care for the sick until such time as the patients can be moved to the Walter Reed Army General Hospital will answer the purpose. A suitable infirmary building, in keeping with the other buildings at the post, is estimated to cost $25,000.

Fort Logan H. Roots, Ark.—The hospital at this post is inadequate and obsolete. It has no cellar and was originally heated by stoves, but a small cellar was constructed under an outbuilding for a heating plant. This is unsatisfactory on account of the distance of the boilers from the building, which necessitated the laying of pipes under the porches and open foundations, causing the loss of a large amount of heat, and it is almost impossible to secure a comfortable temperature in the hospital during even moderately cold weather. Plans and specifications were prepared in this office for a small addition to this hospital with the view of better adapting it for use, but the lowest bid received was over $38,000. Owing to the fact that the building is far from being modern or suitable; that the heating and ventilation are unsatisfactory; that there is no cellar; no modern operating room; that the addition, even if authorized, would not modernize it; and that the hospital would continue to be a source of complaint and expense, it was decided to recommend the rejection of all proposals, to recall the plans and specifications, and to ask for sufficient funds to erect a modern hospital of suitable capacity. The hospital at this post should have accommodations for 18 patients, 8 hospital

corps privates, and 2 noncommissioned officers. The high cost of material, labor, and transportation at this post renders building expensive, and it is estimated that $50,000 will be required to erect a modern hospital on the high bluff where this post is located.

Fort Hamilton, N. Y.—In 1904 the commanding officer at this post stated that the present post hospital does not begin to be adequate for the needs of the garrison, that there is insufficient space for attendants, that there is no isolation ward, and no prison ward, and that in the rearrangement of the post a better site has been selected. In 1906 the chief surgeon, Department of the East, stated that the hospital at Fort Hamilton is very badly located, standing on rather low ground, and facing, at a distance of 14 yards, a noisy public highway, on the other side of which are saloons and other objectionable places of public resort. In view of these circumstances it is believed that the interests of the service will be best subserved by erecting a modern hospital on a more appropriate site, especially so as it is proposed to use the present building for a band barrack. A hospital of sufficient capacity for this post should contain accommodations for 40 patients, 16 hospital corps privates, and 4 noncommissioned officers, and the estimated cost of such a building is $60,000.

Fort Benjamin Harrison, Ind.—One ward wing and the administration building of a modern hospital have been erected at this post, but the building has not been completed. It lacks one ward wing and a rear annex. It is insufficient in capacity, and in March, 1909, the surgeon recommended that the hospital accommodations at this post be doubled. The chief surgeon, Department of the Lakes, stated it is important that the hospital at Fort Benjamin Harrison be completed at an early date, as the hospital facilities are inadequate even for the regular garrison, and are entirely so under present circumstances or when this post is used as a base for the maneuver camp. One wing and the annex of the standard plan are yet lacking—in a word, less than half the hospital has been completed. The department commander stated that this hospital should be completed by adding the other wing and rear annex required for the standard plan for a 60-bed hospital. To complete this hospital by adding the other ward wing and rear annex is estimated to cost $40,000.

Fort H. G. Wright, N. Y.—This post is being enlarged by the erection of new batteries, new buildings, etc., and the ultimate strength of the garrison is to be seven companies of coast artillery. The present hospital building is in close proximity to the batteries, and is unsuitable for occupation as a hospital. It is also entirely inadequate, but it is proposed to use the building as a band barrack, and to erect a new modern hospital of sufficient capacity on a suitable site removed from interference by gun fire. The enlarged garrison will require hospital accommodations for 40 patients, 16 hospital corps privates, and 4 noncommissioned officers, and the estimated cost of such a building is $60,000.

Fort Niagara, N. Y.—The hospital at this post has 13 beds, and the garrison is to consist of 8 companies of infantry. This will require hospital accommodations for 32 patients, 15 hospital corps privates, and 4 noncommissioned officers. It is proposed to enlarge this hospital by adding another ward for 12 beds and a rear annex

to contain kitchen, mess hall, hospital corps dormitory, prison ward, isolation ward, etc., and the estimated cost of these improvements is $35,000.

Fort George Wright, Wash.—The hospital at this post is inadequate, and is not complete. It consists of two ward wings and an administration building, and it is proposed to enlarge the capacity by adding the rear annex which was omitted when the building was erected. This will contain the kitchen, mess hall, hospital corps dormitory, prison ward, isolation ward, etc., and the estimated cost of this improvement is $25,000.

Owing to the increase in coast artillery and the concentration of companies at various posts, it is necessary to increase the hospital accommodations by enlarging the buildings, and it is estimated that $100,000 will be required for the purpose.

Isolation hospitals.—Seven of these hospitals have been authorized, one of which has been completed, three are in course of erection, and three remain to be contracted for. Similar hospitals for the treatment of contagious diseases are needed for a number of military posts, and it is believed that at least three of these buildings should be provided in each year until all the regimental and large artillery posts are supplied, as these buildings are absolutely necessary for the treatment of contagious diseases.

In addition to the foregoing, plans and specifications were prepared in this office for hospital corps sergeants' quarters authorized for Columbus Barracks, Ohio; Jefferson Barracks, Mo.; Fort Leavenworth, Kans.; Fort Slocum, N. Y.; and the Walter Reed Army General Hospital, District of Columbia. These are all double sets of quarters, and those at Columbus Barracks, Ohio; Jefferson Barracks, Mo.; and the Walter Reed Army General Hospital have been completed. The others are in course of erection and are nearing completion. A number of large military posts are in need of these double sets of quarters, and the appropriation should be liberal until such time as the hospital corps sergeants are supplied with suitable habitations. All the quarters at military posts already established and occupied have been repaired, improved, and kept in good condition so far as funds would permit.

MEDICAL AND HOSPITAL SUPPLIES.

The amount estimated for appropriation "Medical and Hospital Department" by this office for the fiscal year ending June 30, 1909, was $700,000. This estimate was approved by the War Department and the amount appropriated by Congress; with this amount it has been possible to meet the demands of the Medical Department in a much better way than has been done since 1906. During the latter part of that fiscal year the fire occurred in San Francisco, which was a great drain on this appropriation, and during the first part of the fiscal year 1907 troops were sent to Cuba, and the equipment of the troops maintained there until April, 1909, was a constant source of expense, and no adequate return was made for these extraordinary expenditures by special appropriation.

Upon the withdrawal of troops from Cuba the early part of this calendar year the regular supplies that had been used on the island were sent to the depot in New York City and the field supplies to the

field supply depot in this city. As usual in such cases, a great quantity of the supplies returned were found unfit for reissue and have been condemned. The estimated extraordinary medical expenses out of the "Medical and Hospital" appropriation incident to the late intervention in Cuba was $133,934.46.

The medical supply depot in New York City, which is the main purchasing depot for regular supplies, was badly damaged by fire on the morning of November 17, 1908. The estimated damage to supplies was placed at $73,753.27. A special appropriation of $50,000 to replace these supplies was obtained in the act making the appropriation for the support of the army for the fiscal year ending June 30, 1910. The building occupied by the depot was so badly damaged by this fire that it was found necessary to rent another building. A suitable structure was found on West street and the transfer of the depot was accomplished under a great many difficulties. The new building is admirably adapted for a supply depot.

The assembling of field equipment has been continued during the past year and valuable additions have been made to the supplies already in store. The expenditure for this purpose during the year was $322,976. This includes the special appropriation of $200,000 given by Congress in the bill making appropriation for the army for the fiscal year 1909, the appropriation "Replacing medical supplies" accumulated during the fiscal year ending June 30, 1908, and the small amount that could be spared from the regular appropriation. I consider the assembling of field supplies which can not be obtained in the market in case of emergency one of the most important duties of this office. The department is now confronted with the serious question of storage facilities for these supplies. The two large storerooms at the powder depot, St. Louis, are almost filled, and the field supply depot on Pennsylvania avenue, in this city, is also filled. The question of additional storage room must be taken up very soon.

During the year an automatic fire-extinguishing system has been installed in the field supply depot, this city.

The Philippine Islands continue to make heavy demands on the department for medical supplies. During the year ending June 30, 1909, supplies to the amount of $62,001.28 were shipped to the supply officer, Manila. This does not include the sum of $60,000 allowed the chief surgeon of the Philippines Division to meet the incidental expenses of the division.

During the year a new ambulance much superior to the old one was recommended by the transportation board, convened by paragraph 5, General Orders, No. 262, War Department, November 7, 1907, and adopted. About 12 old-pattern ambulances have been remodeled to meet the specifications of the new model.

Standard medical supplies for the equipment of the organized militia were issued during the year to States and Territories to the amount (first cost) of $26,399.99, these supplies remaining the property of the United States. In addition, army medical property was sold to the States for the same purpose to the amount of $3,196.50, title passing to the States. The medical issues from stock for the use of the Isthmian Canal Commission during the year amounted to $10,420.44, while transfers to various other branches of the public service totaled $2,603.88. Other sales for cash, as authorized by existing law and regulations, were made to the amount of $3,539.94.

All the issues and transfers referred to are enumerated in the detailed tables given below, together with such of the cash sales as were of record June 30. Settlements were not effected for some of the issues, transfers, and sales in question until after the close of the fiscal year. The amounts here noted will be found, therefore, to be greater than those given for the same heads in the financial statement which appears elsewhere in this report, the latter covering settled transactions only.

A. Supplies issued to States and Territories for use of the organized militia, under section 1661, Revised Statutes, and appropriations supplementary thereto:		
Alabama	$797.48	
Arkansas	1,110.03	
California	95.20	
Connecticut	594.20	
Delaware	.75	
Georgia	680.00	
Illinois	2,537.34	
Indiana	16.53	
Iowa	1,196.02	
Kansas	366.88	
Maine	576.71	
Maryland	101.52	
Massachusetts	1,919.20	
Michigan	1,187.96	
Minnesota	450.84	
Mississippi	204.00	
Missouri	3,892.67	
Nebraska	93.33	
New Jersey	415.32	
New York	2,978.56	
North Carolina	421.77	
Ohio	1,899.11	
Oregon	227.35	
Pennsylvania	.15	
Rhode Island	165.00	
South Dakota	6.30	
Utah	271.03	
Virginia	3,474.14	
Washington	206.60	
Wisconsin	514.00	
		$26,399.99
B. Sales to States under section 17, act of January 21, 1903 (32 Stats., 778):		
Connecticut	153.36	
Massachusetts	134.40	
Ohio	8.26	
Pennsylvania	2,900.48	
		3,196.50
C. Supplies transferred to other bureaus and departments of the Government:		
Bureau of Immigration	1,321.88	
Bureau of Forestry	89.95	
Navy	144.24	
Quartermaster's Department, U. S. Army	30.40	
Engineer Department, U. S. Army	1,017.41	
Isthmian Canal Commission	10,420.44	
		13,024.32
D. Sales to the civil government of the Philippine Islands		410.46
E. Sale to the Republic of Cuba		1,395.10
F. Sale to an officer of the Public Health and Marine-Hospital Service		11.00
G. Sales to civilian employees of the army and civilians		1,723.38
Total		46,160.75

BOARD FOR FIELD MEDICAL EQUIPMENT AND TRANSPORTATION.

In addition to the recommendations heretofore made by the field medical equipment board, note of which is made on page 99 of the Surgeon-General's report for 1908, the board has taken up and disposed of the following:

1. TRAVOIS.

The board will recommend that the travois be adopted as a part of the regular field equipment of the Medical Department. The type of travois heretofore used will be recommended, only minor changes having been made by the board. The specifications will call for second-growth hickory as the wood to be used. This is deemed of great importance, since only by the use of the best material can the necessary strength, lightness, and resiliency be secured.

2. TRAVOIS HARNESS.

A simple and comparatively inexpensive harness has been devised for use with the travois. This consists essentially of tugs attached to an adjustable breast collar, a broad leather back strap with loops for the shafts of the travois, and a belly strap. It can be used either with or without the cavalry saddle. The board will recommend that this harness, like the travois, be furnished by the Medical Department.

3. LITTER FITTINGS FOR RAILWAY CARS.

The board secured from Simonis & Co., of London, a number of sets of "Linxweiler" fittings for converting railway cars into hospital cars. These are simple, strong, easily assembled, and compact when "knocked down." They can be used either with ordinary box cars or by removing the seats with passenger day coaches. With these fittings 16 patients can be accommodated in a 36-foot box car or 28 in a day coach. The regular litter is used with these fittings. The price quoted is, in lots of 500 sets, $75 per set. A "set" will accommodate four patients. The board will probably recommend the adoption of this type, but is now in communication with a German firm which furnishes a somewhat similar device which may prove to be superior in some respects.

[Extract from report of board, dated July 16, 1908.]

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It is also recommended that the cost of altering ambulances of the 1900 pattern to conform to the new specifications be ascertained, with a view to converting all ambulances of that pattern now in stock.

It is recommended further that there be constructed such additional number of the new-type ambulance as may be necessary to completely equip the army and provide for such reserve as may be determined upon, or at least that as soon as possible all posts be provided with them to enable medical officers and hospital corps men to familiarize themselves with the new methods of loading and unloading patients made necessary by the alterations.

It is also recommended that all unserviceable, antiquated, and nondescript kinds of ambulances now in use or in storage be disposed of by sale or otherwise.

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ARMY MEDICAL MUSEUM.

The total number of specimens in the museum at the end of the fiscal year, June 30, 1909, is 34,338.

The following statement shows in detail the additions and changes in the different sections.

Pathological section:	
In museum June 30, 1908	12,970
Discarded	147
	12,823
Received during the year	152
In museum June 30, 1909	12,975
Anatomical section:	
In museum June 30, 1908	1,202
Discarded	3
	1,199
Received during the year	1
In museum June 30, 1909	1,200
Section of comparative anatomy:	
In museum June 30, 1908	696
Discarded	2
In museum June 30, 1909	694
Microscopical section:	
In museum June 30, 1908	12,916
Miscellaneous section:	
In museum June 30, 1908	3,046
Received during the year	39
In museum June 30, 1909	3,085
Provisional pathological section:	
In museum June 30, 1908	695
Discarded and donated	149
In museum June 30, 1909	546
Provisional anatomical section:	
In museum June 30, 1909	378
Photographic section:	
In museum June 30, 1909	2,544

RECAPITULATION.

Specimens in museum June 30, 1908	34,447
Discarded and donated	301
	34,146
Added during the year	192
In museum June 30, 1909	34,338

The following are some of the interesting pathological specimens received during the fiscal year ending June 30, 1909:

Monstrosities.—Specimen 14038, dipygus parasiticus in a turkey. Contributed by Mrs. J. H. Kepler, Catlett, Va.

Shot wounds.—Specimen 13950, laceration of liver; death in seventy minutes; by First Lieut. Frank Suggs, Medical Reserve Corps, U. S. Army. Specimen 14031, shot fracture of thumb, and 14040, shot fracture of finger; by First Lieut. H. Du R. Phelan, Medical Reserve Corps, U. S. Army. Specimens 13941 and 13942, shot fracture of vertebræ and ribs; death from traumatic pneumonia; by Maj. G. A. Skinner, Medical Corps, U. S. Army.

Syphilis.—Specimens 14070 to 14072, gummata of liver, subphrenic abscess, and interstitial nephritis; woman, age 26; by Dr. D. S. Lamb, Army Medical Museum. Specimen 14045, gumma of testicle, removed by operation; by Dr. J. J. Mundell, Washington, D. C.

Amœbic dysentery.—Specimens 13977 and 13978, the liver and colon; abscess of liver; by Board for Study of Tropical Diseases, Manila, P. I.

Tuberculosis.—Specimens 13958 to 13972; series contributed by First Lieut. C. A. Treuholtz, Medical Reserve Corps, U. S. Army. Specimens 13953 to 13956; by Dr. Maude E. Abbott, McGill University, Montreal, Canada. Tuberculosis of testicle; specimens removed by operation; 13987 by Lieut. Col. Wm. H. Arthur, Medical Corps, U. S. Army; 13984 by Lieut. Col. F. A. Winter, Medical Corps, U. S. Army; and 14030 by Lieut. Col. Wm. D. Crosby, Medical Corps, U. S. Army. Specimen 14085, tuberculous testicle, removed by operation; by First Lieut. T. M. Foley, Medical Reserve Corps, U. S. Army.

Hodgkin's disease.—Specimens 13944 to 13946, pancreas, liver, and lymphatic glands; by Lieut. Col. Wm. D. Crosby, Medical Corps, U. S. Army.

Digestive organs.—Specimens 13990 to 14005, series of plaster casts illustrating orthodontia; by Dr. H. A. Pallen, Buffalo, N. Y. Specimens 14006 to 14014, similar specimens; by Dr. J. L. Young, New York City. Specimen 13985, cancer of stomach; man, age 70; by Lieut. Col. Wm. D. Crosby, Medical Corps, U. S. Army. Specimen 14046, concretion of persimmon pulp found in stomach of boy 3 years old; by Dr. Chas. H. Cargile, Bentonville, Ark. Specimen 14068, cancer of intestine; by First Lieut. J. R. Barber, Medical Corps, U. S. Army. Specimen 14047, another persimmon pulp concretion found in intestine of woman, age 42; also by Doctor Cargile. Specimen 13938, diverticulum of appendix; by Dr. Geo. Ben Johnston, Richmond, Va. Specimen 14023, appendicitis; by Maj. W. C. Borden, Medical Corps, U. S. Army. Specimen 14025, acute yellow atrophy of liver; woman, age 22; by Dr. D. P. Hickling, Washington, D. C. Specimen 14042, large fibroma of mesentery; woman, age 36; similar tumor removed one year previously; by Dr. J. Taber Johnson, Washington, D. C.

Nervous system.—Specimen 14045, pneumococcic meningitis; by Dr. H. P. Parker, Washington, D. C. Specimen 14034, endothelioma of brain; man, age 55; by Dr. E. M. Hasbrouck, Washington, D. C. Specimen 14035, neuro-glioma of brain; man, age 27; by Dr. L. S. Green, Washington, D. C.

Respiratory organs.—Specimen 13949, middle turbinal bones, removed by operation; by Dr. R. S. Lamb, Washington, D. C.

Circulatory organs.—Specimen 14032, congenital cardiac interventricular opening; by Board for Study of Tropical Diseases. Specimen 14066, fatty degeneration and rupture of heart; by Capt. E. D. Kilbourne, Medical Corps, U. S. Army. Specimens 14075 and 14076, melanotic tumors of heart and kidney; by Dr. T. V. Hammond, Washington, D. C. Specimen 14067, anomalous origin of right subclavian artery; by Maj. W. O. Owen, U. S. Army, retired. Specimens 14053 and 14082, two aneurisms of aorta with erosion of vertebræ; by Lieut. Col. H. I. Raymond, Medical Corps, U. S. Army, and Dr. W. P. Carr, Washington, D. C., respectively. Specimen 13939, cyst of spleen, excised; by Dr. Geo. Ben Johnston, Richmond, Va.

Urinary organs.—Specimens 13980 to 13982, sarcoma of kidney, bladder, and ileum; by Board for Study of Tropical Diseases. Specimen 13940, urinary calculi removed by operation; by Capt. E. E. Persons, Medical Corps, U. S. Army.

Generative organs.—Specimen 14044, spermatic cord of horse; botryomycosis; by Dr. C. B. Robinson, V. S., Washington, D. C. Specimen 13948, sarcoma of testicle; removed by operation; by Capt. R. S. Porter, Medical Corps, U. S. Army.

Skin.—Specimen 14029, a yaw nodule; by Board for Study of Tropical Diseases. Specimen 14036, epithelioma of eyelid; by Dr. Isabel H. Lamb, Washington, D. C.

Bones.—Specimens 14054 to 14063, bones from Indian graves, showing various lesions, as fracture with repair, osteo-arthritis, osteitis deformans, syphilitic inflammation and congenital dislocation of femur; by Dr. C. B. Moore, Philadelphia, Pa. Specimen 14065, chondroma of femur, removed by operation; by Dr. W. G. Erving,

Washington, D. C. Specimen 14048, epithelioma of lower jaw; removed by operation; by Dr. E. A. Balloch, Washington, D. C.

The extremities.—Specimen 14052, telangiectasis of forearm; amputation; girl 12 years old; congenital; by Lieut. Col. L. A. La Garde, Medical Corps, U. S. Army. Specimen 14018, ainhum of little toe; in negro; removed by operation; by First Lieut. O. W. Pinkston, Medical Corps, U. S. Army. Specimen 13943, gangrene of foot; case of diabetes; by Lieut. Col. Wm. H. Arthur, Medical Corps, U. S. Army. Specimen 14083, large fibroma of leg; amputation; by Dr. T. V. Hammond, Washington, D. C.

Miscellaneous.—Specimen 3194, the Chadwick carrier; for transportation of sick and wounded; by Mrs. F. E. Chadwick, Newport, R. I. Specimen 3199, sample sectional water-closet and flush tank; made by Clow & Sons, Chicago, Ill. Specimen 3208, Linxweiler system of railway ambulance fittings; purchased from Simonis & Co., London, England. Specimen 3217, arrow poison used by the Manyan tribe, P. I.; by Capt. G. H. Scott, Medical Corps, U. S. Army. Specimen 3218, constant water level bath regulator; made by Boekel & Co., Philadelphia, Pa. Specimens 3220 to 3222, series of mosquitoes; by Dr. Clara S. Ludlow, Washington, D. C. Specimen 13957, Path. Series, mass of adipocere removed ninety-six years after death; by Dr. D. S. Lamb, Army Medical Museum.

Also purchased for Museum exhibit: One Griffith water sterilizer, 1 model window tent, 1 Kuhn lung suction mask, 1 Bausch & Lomb portable miscroscope, 1 compressed air manometer, 1 Voigtlander photo microscope stand, 1 Voigtlander traveling microscope stand, 1 Voigtlander improved mechanical stage, 1 model of Darnall sterilizer.

SUMMARY OF LABORATORY WORK AT THE ARMY MEDICAL MUSEUM.

Total examination in typhoid cases	1,436
Suspected typhoid carriers	150
No typhoid bacilli found	148
Typhoid bacilli found	2
(Both were temporary carriers.)	
Widal examinations	344
Positive	144
Negative	200
Blood cultures	28
Positive	4
Negative	24
Cultures from clot	157
Positive	5
Negative	152
Feces from convalescents	433
Positive	22
Negative	411
Urine from convalescents	323
Positive	7
Negative	316

CLINICAL LABORATORY EXAMINATIONS.

Red blood cell and leucocyte counts	20
Differential counts	13
Examinations for malaria	6
Urine analyses	175
Examination of sputa	42
Examination of feces	10
Bacteriological examinations of water	72
Bacteriological examinations of cultures, pus, blood, etc	27
Autogenous bacterial vaccines prepared	35
Animal inoculations for diagnosis, preparation of sera, etc	120
Histological examinations of operative specimens distinct from Museum specimens	45

CLINICAL LABORATORY EXAMINATIONS.

A mailing package has been adopted which makes it possible to send safely samples of blood, urine, and feces through the mails for examination in one of the larger service laboratories.

It is highly desirable that these examinations be made as soon after the specimens are collected as possible, and laboratories have been established at San Francisco, Cal., and Fort Leavenworth, Kans., for the purpose of conducting these examinations in addition to the laboratory of the Surgeon-General's office. Other laboratories for infectious diseases will be established at central points as they are needed.

No convalescents from typhoid fever are now returned for duty to their organizations until it has been shown that they are not excreting typhoid bacilli in their urine and feces.

A similar examination of the urine and feces of all recruits who give a history of having had the disease is made before they are sent away from the recruiting stations.

No chronic bacillus excretors have been discovered up to the present time.

LIBRARY OF THE SURGEON-GENERAL'S OFFICE.

The following table shows the additions made to the library during the fiscal year 1908–9:

Description.	On hand June 30, 1908.	Added during fiscal year.	Total June 30, 1909.
	Volumes.	*Volumes.*	*Volumes.*
Medical journals	51,246	1,325	52,571
Medical transactions	8,214	172	8,386
Bound theses	2,544	60	2,604
Bound pamphlets	2,886	206	3,092
Other medical books	100,452	1,774	102,226
Total	165,342	3,537	168,879
Medical theses	78,594	3,033	81,627
Medical pamphlets	212,752	3,181	215,933
Total	291,346	6,214	297,560

There were presented to the library during the year 857 books and 7,862 pamphlets and journals. The most noteworthy gift received was that of Sir T. Lauder Brunton, consisting of 200 bound volumes containing 7,000 pamphlets on pharmacology and other medical subjects. This present of the distinguished pharmacologist, representing as it does a large part of the collection of a lifetime, is a gratifying testimonial of the appreciation in which the Surgeon-General's library is held abroad.

An exhibition illustrating the history of medicine by means of the masterpieces of medical literature and the epoch-making books and pamphlets issued since the invention of printing has been begun. The library has never made a specialty of collecting manuscripts, so this exhibition will consist entirely of printed works. The works of the old masters of medicine—Hippocrates, Galen, Celsus, and Avicenna—will appear in the first Latin or Greek imprints. The books and pamphlets of later years, giving to the world the discoveries of Harvey, Auenbrugger, Jenner, Pinel, Laennec, Beaumont, Morton, Marion Sims, Walter Reed, and many others, will appear in their original form. The whole, when it is completed, will constitute a unique collection.

Volume XIV, second series, of the Index Catalogue, will be ready for distribution at the usual time. The manuscript for Volume XV is in course of preparation.

ARTIFICIAL LIMBS.

Under laws relating to artificial limbs, apparatus, or commutation therefor, orders were given on manufacturers for 163 legs, 3 arms, 1 foot, and 1 apparatus, and commutation certificates were issued for 1,801 cases amputated leg, 1,894 amputated arm, 49 amputated foot, and for 2,181 cases of loss of use of limb.

Under act of June 17, 1870, and subsequent amendments thereto, 23,626 disabled soldiers and sailors have been furnished artificial limbs or apparatus, or have received commutation in money as follows:

Total number benefited to June 30, 1909, 23,626; died, 12,136; dropped from rolls, 592; rejected after one or more payments, 567; remaining on rolls at end of the fiscal year, 10,331.

It is estimated that $105,000 will be required to pay the claims coming due during the fiscal year ending June 30, 1911.

One hundred and ninety appliances were issued during the fiscal year and 546 trusses were furnished and fitted.

FINANCIAL STATEMENT, 1909.[a]

Medical and hospital department, 1909.

Appropriated by act approved May 11, 1908		$700,000.00
Transfer to this head made by the Treasury Department to correct a disbursing error, from "Medical and hospital department, 1908"	$31.50	
Other refundments during the year	15.08	
		46.58
Total to be accounted for		700,046.58
Disbursed during the year:		
Expenses of medical supply depots	1,019.85	
Medical and hospital supplies	341,600.19	
Medical attendance and medicines (except at recruiting stations)	11,803.28	
Medical expenses of recruiting (including medical attendance and medicines at recruiting stations)	9,307.90	
Pay of nurses	678.29	
Pay of other employees	154,932.77	
Laundering of hospital linen	28,289.26	
Expressage	117.14	
Notary fees	69.96	
Telephone service, medical department steam laundry, Manila	42.00	
Water rent, Manila	180.34	
Gas and electricity for medical apparatus	336.56	
Unclassified [b]	95.88	
		548,473.42

[a] The "disbursements" in this statement include settlements with public creditors made by the accounting officers of the Treasury and charged by them to these appropriations.

[b] Being the amount of six vouchers for June, 1909, inadvertently mailed by the disbursing officer in Manila to the payees thereof, not yet received in this office at the date of this compilation, August 19, 1909, and accordingly not available for classification.

Balances on hand June 30, 1909:		
In United States Treasury and in transit thereto	$113,725.76	
In hands of disbursing officers—		
New York City	10,138.55	
Washington, D. C.	9,900.57	
St. Louis, Mo.	1.98	
San Francisco, Cal.	3,670.07	
Honolulu, Hawaii	12.30	
Manila, P. I.	13,275.76	
Transport *Kilpatrick*	848.17	
		$151,573.16
Total accounted for		700,046.58

Medical and hospital department, 1908.

Balance on hand July 1, 1908, act March 2, 1907		$39,281.38
Refundments during the year		314.00
Total to be accounted for		39,595.38
Disbursed during the year:		
Expenses of medical supply depots	$146.03	
Medical and hospital supplies	24,779.45	
Medical attendance and medicines (except at recruiting stations)	4,827.49	
Medical expenses of recruiting (including medical attendance and medicines at recruiting stations)	1,483.95	
Pay of nurses	40.00	
Pay of other employees	2,337.19	
Laundering of hospital linen	2,623.61	
Expressage	9.92	
Telephone service, medical department steam laundry, Manila	6.00	
Water rent, Manila	168.82	
Gas and electricity for medical apparatus	68.39	
		36,490.85
Transfer by the Treasury Department to "Miscellaneous receipts," being the proceeds of private laundry work done for sanitary reasons at the medical department steam laundry, Manila, erroneously credited to this appropriation during the fiscal year 1908		2,445.40
Transfer by the Treasury Department to "Medical and hospital department, 1909," to correct disbursing errors		31.50
Balance in United States Treasury June 30, 1909		627.63
Total accounted for		39,595.38

Medical and hospital department, 1907.

Balance on hand July 1, 1908, act June 12, 1906		$1,162.78
Disbursed during the year:		
Medical and hospital supplies	$140.82	
Medical attendance and medicines (not at recruiting stations)	.65	
		141.47
Carried to surplus fund		1,021.31
Total accounted for		1,162.78

Medical and hospital department, 1906, and prior years.

Refundments during the year	$8.87
Carried to surplus fund	8.87

Relief of Joseph W. Parish (act Feb. 17, 1903).

Amount appropriated as per warrant June 30, 1909	$181,358.95
Disbursed by Treasury settlement	181,358.95

Replacing medical supplies, 1909–10 (act June 12, 1906—34 Stats., 256).

AMOUNTS ACCRUING TO THIS FUND.

A. On account of supplies transferred:		
To Immigration Service	$1,321.88	
To Forest Service	89.95	
To Quartermaster's Department, U. S. Army	25.00	
To Engineer Department, U. S. Army	124.33	
To Isthmian Canal Commission	10,391.96	
To States, for use of militia	22,695.54	
		$34,648.66
B. On account of supplies sold:		
To States, for use of militia	3,188.24	
To civil government, Philippine Islands	410.46	
To Republic of Cuba	1,395.10	
To officer of Public Health and Marine-Hospital Service	11.00	
To civilian employees and civilians	1,723.38	
		6,728.18
C. On account of collections from carriers and others for medical property lost or destroyed		492.71
Total to be accounted for		41,869.55
Balance on hand in United States Treasury June 30, 1909		41,869.55

Replacing medical supplies, 1908–9.

Balance on hand July 1, 1908	$33,029.40

AMOUNTS ACCRUING TO THIS FUND.

A. On account of supplies transferred:		
To Forest Service	$262.50	
To Engineer Department, U. S. Army	91.62	
To Isthmian Canal Commission	3,824.63	
To States, for use of militia	3,716.03	
To relief of cyclone sufferers in Southern States	3,911.51	
		$11,806.29
B. On account of supplies sold:		
To civil government, Philippine Islands	2.33	
To civilian employees and civilians	311.09	
		313.42
C. On account of collections from carriers and others for medical property lost or destroyed		412.80
		45,561.91
Disbursed during the year		41,678.91
Balance in hands of disbursing officer New York, N. Y., June 30, 1909		3,883.00
Total accounted for		45,561.91

Replacing medical supplies, 1907–8.

Balance on hand July 1, 1908	$2,273.36
Amounts accrued during the year on account of collections from carriers for medical property lost or destroyed	30.10
Total to be accounted for	2,303.46
Disbursed during the year	2,270.35
Balance in United States Treasury June 30, 1909	33.11
Total accounted for	2,303.46

Replacing medical supplies destroyed by fire, 1909–10.

Appropriated by act approved March 4, 1909	$50,000.00
Balance in United States Treasury June 30, 1909	50,000.00

Field medical equipment.

Balance on hand July 1, 1908, act May 11, 1908	$200,000.00
Disbursed during the year	199,916.00
Balance in United States Treasury June 30, 1909	84.00

Artificial limbs, 1909.

Appropriated by act approved May 27, 1908		$400,000.00
Refunded during the year		125.00
Total to be accounted for		400,125.00
Disbursed during the year		349,138.35
Balances on hand June 30, 1909:		
In United States Treasury	$48,772.65	
In hands of disbursing officer, Washington, D. C.	2,214.00	
		50,986.65
Total accounted for		400,125.00

Artificial limbs, 1908.

Balance on hand July 1, 1908, act March 4, 1907	$23,060.56
Disbursed during the year	3,277.00
Balance on hand June 30, 1909, in United States Treasury	19,783.56

Artificial limbs, 1907.

Balance on hand July 1, 1908, act June 30, 1906	$10,120.56
Disbursed during the year	40.50
Carried to surplus fund	10,080.06
Total accounted for	10,120.56

Artificial limbs, 1906 and prior years.

Amount of warrant under act of March 3, 1875 (18 Stats., 418)	$146.00
Transfer to "Transportation of the army and its supplies, 1906," for transportation furnished a beneficiary of the artificial-limb laws conformably to act August 15, 1876 (19 Stats., 204)	146.00

Appliances for disabled soldiers, 1909.

Appropriated by act approved May 27, 1908		$2,000.00
Disbursed during the year		1,353.30
Balance on hand June 30, 1909:		
In United States Treasury	$600.00	
In hands of disbursing officer, Washington, D. C.	46.70	
		646.70

Appliances for disabled soldiers, 1908.

Balance on hand July 1, 1908, act March 4, 1907	$786.24
Disbursed during the year	99.25
Balance on hand June 30, 1909, in United States Treasury	686.99

Appliances for disabled soldiers, 1907.

Balance on hand July 1, 1908, act June 30, 1906		$756.61
Carried to surplus fund		756.61

Army Medical Museum, 1909.

Appropriated by act approved May 11, 1908		$5,000.00
Disbursed during the year		3,153.10
Balances on hand June 30, 1909:		
In United States Treasury	$992.85	
In hands of disbursing officer, Washington, D. C.	854.05	
		1,846.90

Army Medical Museum, 1908.

Balance on hand July 1, 1908, act March 2, 1907		$1,589.58
Disbursements during the year		1,182.20
Balance on hand June 30, 1909, in United States Treasury		407.38

Army Medical Museum, 1907.

Balance on hand July 1, 1908, act June 12, 1906		$9.53
Carried to surplus fund		9.53

Library, Surgeon-General's Office, 1909.

Appropriated by act approved May 11, 1908		$10,000.00
Disbursed during the year		5,917.15
Balances on hand June 30, 1909:		
In United States Treasury	$2,980.77	
In hands of disbursing officer, Washington, D. C.	1,102.08	
		4,082.85

Library, Surgeon-General's Office, 1908.

Balance on hand July 1, 1908, act March 2, 1907		$4,160.16
Disbursements during the year		3,635.95
Balance on hand June 30, 1909, in United States Treasury		524.21

Library, Surgeon-General's Office, 1907.

Balance on hand July 1, 1908, act June 12, 1906		$208.98
Disbursed during the year		2.50
Carried to surplus fund		206.48
Total accounted for		208.98

Furnishing trusses to disabled soldiers, indefinite appropriation (secs. 1176, 1177, and 1178, R. S., and act of Mar. 3, 1879).

Balance on hand July 1, 1908		$2,500.37
Drawn during the year		1,809.00
Total to be accounted for		4,309.37
Disbursements during the year		3,959.14
Balance June 30, 1909, in hands of disbursing officer, Washington, D. C.		350.23
Total accounted for		4,309.37

General summary of all appropriations.

Balances on hand July 1, 1908	$318,939.51
Appropriated	1,350,167.95
Proceeds of sales, etc., accruing to replacing funds, act June 12, 1906 (34 Stats., 256)	54,432.16
Refunded during the year	608.95
Total to be accounted for	1,724,148.57
Disbursed during the year	1,382,234.39
Transferred to "Miscellaneous receipts"	2,445.40
Carried to surplus fund	12,082.86
Balances on hand June 30, 1909	327,385.92
Total accounted for	1,724,148.57

VITAL STATISTICS.

The following tables show in detail the statistical data upon which the statements in this report are based:

66. Surgical operations performed on American troops.

67. Numerical view of the effect of disease and injury on United States troops serving at home and abroad in the year 1908, compared with corresponding data for the year 1907, by races.

68. Admissions to sick report, discharges, and deaths in the army, with ratios per 1,000 of mean strength, in which all available data for the period 1898–1907 are placed in comparison with the year 1908.

69. Admissions to sick report, discharges, deaths, and noneffectiveness, with ratios per 1,000 of mean strength, year 1908, for officers and total enlisted of the army.

70. Admissions to sick report, discharges, deaths, and noneffectiveness, with ratios per 1,000 of mean strength, for American troops, of the army, white, colored and total, for the year 1908.

71. Admissions to sick report, discharges, deaths, and noneffectiveness, with ratios per 1,000 of mean strength, for the year 1908, United States continental, excluding Alaska, and separately for white and colored troops serving therein.

72. Admissions to sick report, discharges, deaths, and noneffectiveness, with ratios per 1,000 of mean strength, for the year 1908, Alaska, Cuba, and Hawaii.

73. Admissions to sick report, discharges, deaths, and noneffectiveness, with ratios per 1,000 of mean strength, for the year 1908, American troops, white, colored, and total serving in the Philippine Islands.

74. Admissions to sick report, discharges, deaths, and noneffectiveness, with ratios per 1,000 of mean strength, year 1908, for American troops on transports and for native Porto Rican and Filipino troops.

75. Total movement of sick for the United States Army at home compared with that of foreign armies.

76. A comparison of the admission and death rates of the United States at home for certain special diseases with those of foreign armies.

77. A comparison of the most important diseases by departments, United States.

Very respectfully,

GEO. H. TORNEY,
Surgeon-General U. S. Army.

The SECRETARY OF WAR.

APPENDED PAPERS—STATISTICAL TABLES.

TABLE No. 66.—*Surgical operations reported by medical officers as having been performed by them on officers and enlisted men of the army during the calendar year 1908.*

Operation.	Disease or injury.	Cases.	Result.				Anesthetic.				
			Successful.	Partially successful.	Failure.	Died.	Chloroform.	Ether.	Chloroform and ether.	Local.	None.
	Eye.										
	Glaucoma	1	1					1			
Extirpation of eyeball	Kerato-iritis	1	1				1				
	Panophthalmitis	1	1				1				
	Traumatism of eye	8	8				2	6			
Iridectomy	Synechia due to gonorrheal conjunctivitis.	1	1					1			
Do	Lacerated wound of eye	1	1								1
Attempt to sever band	Pupillary band, the remains of traumatic cataract.	1			1					1	
Cutting of shred	Shred capsule in pupil, the result of traumatic cataract.	1	1							1	
Division of cicatricial band.	Simblepharon and entropion, lower lid.	1	1							1	
Tenotomy 1 Shortening of rectus by tuck method 3 Transplantation 1	Strabismus	4	4					1		3	
Transplantation—Desmarres's 4 Excision 17 Excision—De Schweinitz's 1	Pterygium	23	23					1		22	
Grattage 1 Expression 13	Trachoma	14	12	2			2	11		1	
Incision and curettage	Chalazion	6	6							5	1
Excision	Meibomian cyst	1	1							1	
Extraction	Foreign body embedded in cornea.	3	3							3	
	Ear.										
Mastoidotomy 14 Mastoidotomy and curettage 2	Mastoiditis	16	12	2		2	6	10			
Paracentesis	Otitis media, acute	5	5				1			3	1
Mastoidotomy, exploratory 3 Removal of septal shelf 1 Ossiculectomy 1 Curettage and drainage 1 Excision of polypus 2 Paracentesis 2	Otitis media, chronic	10	10					4		6	
Incision and drainage	Abscess, auricular	1	1					1			
Do	Abscess, external meatus	1	1							1	
Removal with cautery	Condylomata, peri-auricular	1	1					1			
Suturing of helix 1 Suturing of tragus 1	Laceration of ear	2	2								2
	Nose.										
Drilling into antrum	Empyema, antrum of Highmore.	2	2					1			1
Excision of turbinate.	Spheno-ethmoiditis	1	1							1	
Excision	Hypertrophy of turbinate bodies.	20	20				1			13	6
Gleason's operation 1 Submucous resection 5 Fracture and reposition 4 Asch's operation 2 Submucous resection 3 Excision of obstructing cartilage 1	Deflection of septum	16	16					3		7	
	Deviation of septum	6	6							4	
Excision with saw	Exostosis and enchondrosis of septum.	3	3							3	
Excision	Septal spur	18	18							18	
Excision with snare	Nasal polypus	13	12	1						12	1
Excision	Polypoid degeneration, middle turbinate.	2	1	1						2	
Incision and drainage	Abscess, nasal fossa	1	1							1	
Excision	Adenoids, post nasal	10	10							10	

TABLE NO. 66.—*Surgical operations reported by medical officers as having been performed by them on officers and enlisted men of the army during the calendar year 1908*—Con.

Operation.	Disease or injury.	Cases.	Result.				Anesthetic.				
			Successful.	Partially successful.	Failure.	Died.	Chloroform.	Ether.	Chloroform and ether.	Local.	None.
	Mouth, pharynx, and esophagus.										
Excision	Epithelioma, lower lip	2	2					1		1	
Do	Cyst, inner surface lip	3	3							3	
Division of frenum	Tongue-tie	2	1	1						1	1
Incision to form artificial duct.	Salivary cyst, sublingual	2	2							2	
Incision and drainage	Abscess, sublingual gland	1	1					1			
Incision and curettage	Necrosis of palate	1	1								1
Tonsillectomy	Tonsillitis	49	49				1			46	2
Do	Hypertrophy of tonsil	291	291				1	1		277	12
Excision	Polypus of tonsil	1	1							1	
Excision with snare	Polypus, naso-pharyngeal	1	1					1			
Removal with curet and forceps.	Adenoids, naso-pharyngeal	78	78				1	4		67	6
Incision and drainage	Abscess, post-pharyngeal	1	1							1	
Do	Vincent's angina	1	1					1			
	Neck and thorax.										
Partial thyroidectomy. 1 Removal of tumor, isthmus, and pyramidal lobe 1	Goiter	2	2					2			
Thoracotomy 8 Thoracotomy with resection of rib 6	Empyema	14	12	2			8	6			
Aspiration 13 Thoracentesis 2	Pleurisy	15	14	1						14	1
Extraction of bullet and drainage.	Gunshot wound of chest	2	2				1			1	
Removal of bone spiculæ and drainage.	Gunshot wound of chest, perforating.	1	1								1
	Abdomen.										
Pyloroplasty	Gastric ulcer	1	1					1			
Exploratory laparotomy	Gastritis, chronic	1	1					1			
Do	Suspected carcinoma of stomach. Result, negative.	1	1					1			
Do	Abdominal mass, hypogastric region, deeply situated, large, hard, and nodular, inoperable, probably carcinoma.	1	1					1			
Do	Tumor of liver, type undetermined.	2	2					2			
Resection of ninth rib. Exploratory operation.	Tumor of liver, malignant	1	1					1			
Cholecystotomy 1 Withdrawal of ascitic fluid 1	Cirrhosis of liver	2	2					1			1
Omentopexy	Cirrhosis of liver, hypertrophic.	1	1					1			
Thoracoplasty with rib resection 11 Incision and drainage. 9 Bevan's incision 1 Kocher's incision 1 Aspiration 2	Abscess of liver	22	22				4	17		1	
Exploratory laparotomy 2	Suspected abscess of liver	4	4					4			
Cholecystotomy	Empyema of gall bladder	2	2					2			
Do	Cholecystitis	4	3			1		4			
Cholecystostomy	Cholecystitis acute calculous, infective, with pericholecystitis.	1	1						1		
Cholecystotomy	Cholelithiasis	2	2					2			
Choledochostomy	Cholelithiasis, with impaction of common bile duct.	1	1					1			
Exploratory cholecystotomy.	Suspected gallstones	2	2				1	1			
Laparotomy and breaking up of adhesions 2 Laparotomy and ligation of adhesions 1	Hepato-omental adhesions	3	3					3			

TABLE No. 66.—*Surgical operations reported by medical officers as having been performed by them on officers and enlisted men of the army during the calendar year 1908*—Con.

Operation.	Disease or injury.	Cases.	Result.				Anesthetic.				
			Successful.	Partially successful.	Failure.	Died.	Chloroform.	Ether.	Chloroform and ether.	Local.	None.
	Abdomen—Continued.										
Incision and drainage	Abscess, subphrenic	1	1				1				
Abdominal section, and suture of intestinal wall.	Perforation of intestine during course of typhoid fever.	2				2	2				
Appendicostomy	Dysentery, chronic amebic	7	7					6		1	
Do	Sprue	1	1					1			
Dissection and ligation 1 Enterorrhaphy 1	Fecal fistula, following operation for amebic dysentery.	2	2					2			
Appendectomy 190 Incision and drainage of appendiceal abscess 6	Appendicitis	196	189		1	6	26	163	7		
Abdominal section, cleansing and drainage.	General peritonitis from rupture of appendiceal abscess.	1	1					1			
Laparotomy and separation of adhesions.	Intestinal obstruction due to adhesions following an appendectomy.	1	1					1			
Incision and drainage	Subperitoneal abscess, following operation for appendicitis.	1	1					1			
Abdominal section	Intestinal obstruction due to omental hernia.	1	1				1				
Section lower abdomen and evacuation of pus. 1 Exploratory laparotomy 1	General peritonitis	2				2	1	1			
Bassini's operation 140 Bassini's modified operation 8 Johns Hopkins's operation 5 Ferguson's operation. 9 Halsteads's operation 2 Mayo's operation 1 Operation not stated. 4	Hernia, inguinal	[a] 169	168			1	30	114	9	16	
Bassini's operation 1 Operation not stated. 1	Hernia, femoral	2	2					1	1		
Mayo's operation 3 Halsteads's operation 1 Layer suture 3 Operation not stated. 2	Hernia, ventral	[b] 9	9				1	7		1	
Herniotomy	Hernia, dorsal	1	1					1			
Incision and removal of wire sutures.	Fistula, inguinal region, resulting from buried silver wire used in operation for inguinal hernia.	1	1				1				
Ligation of bleeding vessels and closure of 4 small perforations of bowels.	Gunshot wound of abdomen	1	1					1			
Laparotomy and drainage	....do	2	1			1		2			
Laparotomy and suture of bowel.	....do	1				1		1			
Enterorrhaphy	....do	1				[c]1	1				
Removal of clots, ligation of bleeding points, and resuturing of wound.	Hemorrhage, acute intestinal, from laparotomy wound.	1	1				1				
Removal of clot and ligation of bleeding vessels.	Stab wound of abdomen, with large hematoma.	1	1					1			
Amputation of portion of omentum.	Incised wound of abdomen.	1	1				1				
Incision and drainage	Wound perforating walls of rectum and extending into peritoneal cavity.	1				1		1			
Exploratory laparotomy	Knife wound of abdomen	1	1					1			
Do	Tuberculosis of abdomen	1		1					1		
Do	For diagnostic purposes	5	2		1	2	3	2			

[a] Two bilateral, 4 recurrent, and 2 strangulated.
[b] Two followed the operation for appendicitis, and 1 a laparotomy for peritonitis;
[c] Died during operation from prior intestinal hemorrhage.

TABLE NO. 66.—*Surgical operations reported by medical officers as having been performed by them on officers and enlisted men of the army during the calendar year 1908*—Con.

Operation.	Disease or injury.	Cases.	Result.				Anesthetic.				
			Successful.	Partially successful.	Failure.	Died.	Chloroform.	Ether.	Chloroform and ether.	Local.	None.
	Anus and rectum.										
Excision of redundant mucous membrane.	Prolapse of rectum	1	1				1				
Cauterization	Ulcer of rectum	1	1				1				
Incision and curettage 3 Incision and packing.. 8 Incision and drainage. 17	Ischio-rectal abscess	28	27		1		6	2	2	15	3
Partial division of sphincter.	Ischio-rectal fistula	1	1				1				
Incision and curettage. 2 Incision and drainage.. 9	Peri-rectal abscess	11	10	1				3		4	4
Linear scarification of rectum.	Prolapsus ani	1	1					1			
Dilatation	Stricture of anus	1	1					1			
Excision 3 Dilatation and curettage 4 Incision, curettage, and packing 26 Incision and drainage. 4	Fistula in ano	37	34	3			15	11	1	8	2
Excision of fissure and suture of resulting wound 1 Curettage and packing. 1 Divulsion 2	Fissure of anus	4	4					4			
Excision 46 Ligation.. 10 Cauterization 3 Ligation and excision. 34 Clamp and cautery... 48 Clamp, cautery, and ligation 2 Ligature and cautery. 1 Incision and curettage 8 Incision and suture... 4 Excision and suture.. 16 Incision and removal of clots 5 Allingham's operation 18 Whitehead's operation 4 Pilcher's operation.... 6	Hemorrhoids, internal. 16 Hemorrhoids, external. 122 Hemorrhoids, mixed.. 33 Hemorrhoids, type not stated 34	205	205				30	113	4	54	4
	Genito-urinary system.										
Nephrectomy	Tuberculosis of kidney	1	1				1				
Nephrotomy	Laceration of kidney	1	1					1			
Exploratory laparotomy..	Floating kidney	1	1					1			
Incision and drainage	Peri-nephritic abscess	2	2				1	1			
Median lithotomy..... 2 Supra-pubic lithotomy. 1	Vesical calculus	3	2		1		1	2			
Orchidectomy	Hypertrophy of testicle	2	2				1	1			
	Tuberculosis of testicle	5	5				1	4			
	Multiple abscess of testicle	1	1					1			
	Undescended testicle	6	6				1	4		1	
	Chronic orchitis	1	1					1			
Bennett's operation... 2 High excision..... 82 Scrotal excision..... 7 Resection of pampiniform plexus..... 3 Excision, site not stated..... 46	Varicocele	140	140				43	53	9	35	
Excision of sac..... 8 Partial excision of sac. 4 Inversion of tunic..... 6 Cauterization..... 2 Paracentesis..... 10 Andrews's operation.. 1 Doyen's operation.... 2 Hearn's operation.... 1 Von Bergman's operation..... 1	Hydrocele	35	34	1			4	10	1	16	4
Incision and drainage.....	Hematocele	1	1							1	
Enucleation	Cyst of epididymis	1	1							1	

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			Successful.	Partially successful.	Failure.	Died.	Chloroform.	Ether.	Chloroform and ether.	Local.	None.
	Genito-urinary system—Con.										
Epididymectomy..... 5 Incision and drainage.. 2	Epididymitis.....	7	7	.....	.....	.....	2	4	.....	.....	1
Incision and drainage	Abscess of epididymis.....	1	1	.....	.....	.....	.....	.....	.....	1	.....
Prostatectomy, Young's..	Hypertrophy of prostate...	1	1	.....	.....	.....	.....	1	.....	.....	.....
Incision and drainage.....	Abscess, periprostatic.....	4	4	.....	.....	.....	1	.....	.....	3	.....
Do.....	Abscess, periurethral.....	6	6	.....	.....	.....	2	.....	.....	2	2
Perineal section..... 2 Internal urethrotomy.. 7 External urethrotomy. 3	Stricture of urethra.....	12	10	.....	.....	a2	5	5	.....	2	.....
Supra-pubic cystotomy, with posterior catheterization and perineal urethrotomy.	Impermeable stricture of urethra.	1	1	.....	.....	.....	.....	1	.....	.....	.....
Meatotomy.....	Stricture of meatus.....	12	12	.....	.....	.....	.....	.....	.....	12	.....
Do.....	Urethral calculus.....	1	1	.....	.....	.....	.....	1	.....	.....	.....
Amputation of glans.....	Epithelioma of glans penis .	1	1	.....	.....	.....	.....	1	.....	.....	.....
Dissection and transplantation..... 1 Plastic..... 4	Hypospadias.....	5	4	.....	1	.....	1	1	.....	3	.....
Reposition.....	Malposition, skin of penis..	1	1	.....	.....	.....	.....	1	.....	.....	.....
Circumcision.....	Redundant prepuce and elongated prepuce..... 124 Phimosis and paraphimosis..... 137 Chancroid and venereal warts..... 24	285	285	.....	.....	.....	27	9	.....	248	1
	Vascular system.										
Trephining.....	Hemorrhage from meningeal artery.	1	.....	.....	.....	1	.....	1	.....	.....	.....
Ligation of artery.....	Severed brachial artery . 2 Severed ulnar artery.... 1 Severed artery, vessel not stated..... 3	6	6	.....	.....	.....	2	2	.....	.....	2
Incision and drainage.....	Thrombo-phlebitis, external saphenous.	1	1	.....	.....	.....	1	.....	.....	.....	.....
Incision, ligation, and drainage.	Aneurism, venous, plantar surface of foot.	1	1	.....	.....	.....	1	.....	.....	.....	.....
Excision..... 12 Multiple excision..... 2 Excision and ligation. 10 Multiple ligation..... 9	Varicose veins.....	33	33	.....	.....	.....	13	16	1	3	.....
	Nervous system.										
Trephining..... 1 Exploratory operation. 1	Abscess of brain.....	2	.....	.....	.....	b2	1	1	.....	.....	.....
Trephining and breaking up of adhesions.	Hemiplegia, following fracture of skull.	1	.....	.....	1	.....	.....	1	.....	.....	.....
Dissection of seventh nerve.	Facial neuralgia.....	1	1	.....	.....	.....	.....	1	.....	.....	.....
Incision of nerve sheath 1 Exposing and stretching of nerve..... 1	Sciatica.....	2	2	.....	.....	.....	.....	2	.....	.....	.....
	Skin and cellular tissues.										
Excision.....	Cicatrix (2 painful).....	5	5	.....	.....	.....	.....	2	.....	3	.....
Excision and skin grafting	Nevus.....	1	1	.....	.....	.....	.....	1	.....	.....	.....
Abscission.....	Tattoo mark.....	1	1	.....	.....	.....	.....	.....	.....	1	.....
Avulsion.....	Hooked nail.....	1	1	.....	.....	.....	1	.....	.....	.....	.....
Excision..... 1 Curettage..... 3	Ulcer.....	4	4	.....	.....	.....	1	3	.....	.....	.....
Skin grafting.....	Ulcer, indolent.....	1	1	.....	.....	.....	.....	.....	.....	.....	1
Do.....	Burn.....	1	1	.....	.....	.....	.....	1	.....	.....	.....
Incision and drainage.....	Carbuncle.....	12	12	.....	.....	.....	.....	.....	.....	9	3
Multiple incision..... 3 Incision and curettage 10 Incision and drainage. 65 Multiple incision..... 3	Cellulitis.....	78	78	.....	.....	.....	7	10	.....	55	6
Incision and curettage. 2 Incision and drainage.. 1	Streptococcus infection.....	6	6	.....	.....	.....	.....	2	.....	4	.....

[a] One died of cerebral apoplexy and 1 of pneumonia.
[b] One died of heart failure during first stage of chloroform anesthesia.

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	Skin and cellular tissues—Continued.										
Curettage and lavage	Sapremia	2	2					2			
Curettage 6 Excision of fibrous tube 1 Curettage, and cavity filled with Morhoff plug 1 Incision and curettage 10 Incision and drainage 240 Incision and curettage	Sinus	8	8				1	2		5	
	Abscess	250	248	1	1		16	11		160	63
	Abscess, chronic, sacral region, probably tubercular.	1			1			1			
Skin grafting	Loss of entire integument of thumb, traumatic.	1	1							1	
	Lymphatic system.										
Extirpation of glands 2 Incision and drainage 5	Adenitis, cervical	7	6	1			1	1	1	2	2
Extirpation of glands 8 Incision and drainage 3 Incision and curettage 37	Adenitis, cervical, tubercular	11	9	2			5	4		2	
Curettage and injection 55 Extirpation of glands 67 Incision and drainage 221 Incision and curettage 4	Adenitis, inguinal, venereal.	380	378	2			65	84	13	176	42
Curettage and injection 41 Extirpation of glands 11 Incision and drainage 102	Adenitis, inguinal, nonvenereal.	158	158				28	55	1	49	25
Incision and curettage 9 Extirpation of glands. 10 Incision and drainage. 31	Adenitis, inguinal, nature not stated.	50	50				5	6	1	30	8
Incision and curettage. 1 Incision and drainage. 1	Lymphadenitis	2	2							2	
	Muscles, tendons, fasciæ, ligaments, and bursa.										
Excision of bursa	Bursitis, subdeltoid	1	1					1			
Excision 1 Incision and drainage 2	Bursitis, olecranon bursa	3	3				1			2	
Suturing of tendons	Laceration of forearm	1	1							1	
Plastic	Hernia, flexor sublimis digitorum.	1	1					1			
Reduction (operation not stated).	Hernia, muscular	1	1				1				
Suturing of tendons	Severed tendons, of finger	3	3				3				
Excision of tubercular mass.	Tubercular tenosynovitis of palm, involving flexor tendons of ring finger.	1	1							1	
Incision and drainage	Thecitis	2	2							2	
Excision	Ganglion	5	5				1			4	
Incision and drainage	Abscess sheath of rectus muscle.	1	1					1			
Bullet located by X-ray near left kidney and removed by excision.	Myositis lumbar muscles, due to presence of bullet.	1	1				1				
Incision, approximation of torn ends, and suturing.	Rupture of gluteus maximus.	1	1				1				
Suturing of tendon	Rupture tendon adductor longus.	1			1			1			
Aspiration 1 Incision and drainage. 1 Excision of bursa 1	Bursitis pre-patellar	3	3							3	
Excision	Hypertrophy tendon sheath of tibialis anticus.	1	1							1	
Shortening of fibers of gastrocnemius.	Defective extension of foot	1	1				1				

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	Muscles, tendons, fasciæ ligaments, and bursæ—Con.										
Excision of bursa	Inflammation of bursa between tendo-achilles and oscalcis.	1	1	....	....	....	....	1	....	....	....
Excision 2 Incision and drainage 2 Partial excision of joint 5 Excision of bony enlargement 11 Excision of bursa 2 Keller's operation 1	Bursitis (site not stated)	4	4	....	....	....	....	1	....	3	....
Tenotomy	Bunion	19	19	....	....	....	9	9	....	1	....
	Hammer toe	2	2	....	....	....	....	....	1	1	....
	Bones.										
Trephining and adjusting of fragments 4 Enlargement of wound and removal of fragments 2	Fracture of skull (2 by gunshot).	6	4	....	....	2	4	2	....	....	....
Wiring of fragments	Fracture lower jaw	5	5	....	....	....	3	2	....	....	....
Fragments united with kangaroo tendon.	Fracture comminuted, of clavicle.	1	1	....	....	....	....	1	....	....	....
Exploration, counter incision, cleansing, and drainage.	Gunshot wound of shoulder, completely destroying joint.	1	....	....	....	[a]1	1	....	....	....	....
Freeing of musculo-spiral nerve, and wiring.	Fracture of humerus	1	....	1	....	....	....	1	....	....	....
Refracture and resetting	Internal deformity, following an accidental refracture of humerus.	1	1	....	....	....	....	....	....	....	1
Incision and removal of necrosed area.	Necrosis of humerus at deltoid insertion.	1	1	....	....	....	1	....	....	....	....
Incision and curettage	Periostitis of humerus	1	....	....	1	....	1	....	....	....	....
Incision, removal of bone fragments, and drainage.	Gunshot wound of elbow	1	1	....	....	....	1	....	....	....	....
Incision and wiring	Fracture of forearm	1	1	....	....	....	....	1	....	....	....
Removal of silver wire suture and excision of ends of fragments of radius.	Nonunion and malposition of fragments of radius, following compound fracture of radius and ulna	1	....	....	1	....	....	1	....	....	....
Excision ends of fragments and wiring.	Nonunion, radius and ulna following comminuted fracture.	1	....	1	....	....	....	1	....	....	....
Refracture and resetting	Fibrous union and faulty position, bones of forearm.	1	....	....	1	....	....	1	....	....	....
Refracture of ulna through open incision, resetting, and wiring.	Deformity of forearm, from compound fracture, both bones.	1	1	....	....	....	....	1	....	....	....
Excision of overlapping ends and wiring of fragments.	Vicious union both bones forearm, from compound fracture.	1	1	....	....	....	....	1	....	....	....
Removal of fragments and suture of tendon.	Gunshot wound, metacarpal bone.	1	1	....	....	....	....	1	....	....	....
Removal of callous from tendon 1 Refracture and wiring 1	Vicious union, metacarpal	2	1	....	1	....	1	1	....	....	....
Removal of fragments	Fracture, comminuted, of thumb.	1	1	....	....	....	....	....	1	....	....
Trimming of bone and suturing.	Avulsion terminal phalanx of thumb.	1	1	....	....	....	....	....	....	1	....
Incision and drainage	Periostitis index finger	1	1	....	....	....	....	....	....	1	....
Excision of necrosed bone.	Necrosis of phalanx	1	1	....	....	....	....	....	....	1	....
Incision and curettage	Caries lower border tenth rib.	1	1	....	....	....	....	....	....	....	1
Laminectomy	Fracture twelfth dorsal and first lumbar vertebræ.	1	....	....	....	1	1	....	....	....	....
Incision and drainage	Psoas abscess	1	....	1	....	....	....	1	....	....	....
Removal of charge and bone fragments.	Gunshot wound penetrating hip joint.	1	....	....	....	1	1	....	....	....	....

[a] Died of tetanus eight days after operation.

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	Bones—Coninued.										
Removal of fragments and impaction broken up by open method.	Fracture comminuted and impacted, femur.	1	1					1			
Incision and wiring of fragments.	Fracture, compound, femur	1	1					1			
Incision	Fracture, simple, femur	1	1				1				
Osteotomy	Osteomyelitis, femur	1			1			1			
Removal of bone fragments.	Gunshot wound of knee	1	1						1		
Incision and wiring of fragments.	Fracture of patella	4	3	1			2	2			
Reduction and removal of fragments.	Fracture compound comminuted, both bones leg.	1			1			1			
Open operation, impaction broken up, and fragments removed.	Fracture comminuted and impacted, tibia.	1			1			1			
Suturing	Fracture, simple, tibia	1	1					1			
Removal of fragments, suturing of muscles and skin grafting.	Fracture, compound comminuted fibula with laceration of perineal muscles, and loss of skin.	1	1						1		
Osteotomy	Displacement, upper fragment of fibula.	1	1					1			
Exploratory osteotomy	Potts fracture	1	1					1			
Trephining, opening enlarged by chiseling, removal of sequestrum, curettage and drainage of medullary canal.	Osteomyelitis of tibia	1	1					1			
Resection of bone	Vicious union of tibia	1	1				1				
Exploratory operation. 1 Exsection and wiring.. 1 Removal of carious bone..... 2 Incision and curettage. 2	Necrosis of tibia	6	5		1		1	5			
Osteotomy	Old fracture of fibula	1		1				1			
Do	Exostosis of tibia	2	2						1	1	
Do	Exostosis of fibula	1	1					1			
Osteotomy and removal of wire.	Silver wire suture tibia	1	1					1			
Incision and removal of section..... 1 Incision and curettage. 1	Periostitis of tibia	2	2					1	1		
Exploratory incision	Periostitis of tibia with foot drop following diphtheritic paralysis.	1	1					1			
Incision and removal of section..... 2 Incision and curettage. 2 Incision and drainage.. 4	Periostitis (site not stated)	8	8				1	2	1	4	
Exploratory osteotomy	Exostosis both heels, gonorrheal.	1	1					1			
Curettage	Necrosis internal cuneiform.	1	1					1			
Resection of metatarsal bone.	Gunshot wound of foot	1	1					1			
Curettage	Caries of metatarsal bone	1	1					1			
Excision of bone	Exostosis of metatarsal bone.	1	1					1			
Excision of dead bone	Necrosis (bone not stated)	7	7				5	2			
	Joints.										
Excision of heads of radius and ulna.	Dislocation complete irreducible, upward and outward of elbow.	1	1					1			
Incision and drainage	Arthritis purulent elbow joint.	1	1				1				
Resection	Dislocation head of radius	1			1			1			
Incision curettage and removal of sequestra.	Ankylosis of wrist, result of gunshot wound.	1	1							1	
Aspiration	Synovitis traumatic of wrist.	2	2								2

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	Joints—Continued.										
Excision of proximal fragment of first phalanx, with attempt to form false joint, and forcible breaking up of fibrous ankylosis of inter-phalangeal joint.	Ankylosis metacarpo-phalangeal, and inter-phalangeal joints of thumb, with faulty union of old fracture first phalanx.	1		1				1			
Resection	Dislocation terminal phalanx ring finger.	1	1							1	
Suturing	Recurrent dislocation eighth sterno-chondral articulation.	1	1				1				
Exploratory incision	Pain at second costo-chondral articulation.	1		1						1	
Laminectomy both sides, and removal of spinous process of first and second dorsal vertebræ.	Dislocation second dorsal vertebra, with complete paralysis and anesthesia below nipple line.	1			1			1			
Puncture and irrigation	Arthritis of knee joint	1	1							1	
Arthrotomy and removal 1 Exploratory incision 2	Floating cartilage knee joint	3	2		1		1	1		1	
Arthrotomy	Tuberculosis of astragalus	1	1					1			
Excision of exostosis 3 Excision of exostosis and resection of joint. 1 Heuter's operation 2 Weir's operation 4	Hallux valgus	10	10				6	4			
Excision of joint	Sub-luxation phalangeal joint great toe.	1	1				1				
Arthrectomy 1 Incision and drainage 1 Aspiration 10 Exploratory incision 1	Arthritis (joint not stated).	2	2				2				
	Synovitis (joint not stated).	11	11					1		2	8
	Amputations.										
Amputation, arm, middle third.	Ankylosis of elbow, with osteomyelitis of humerus and ulna.	1	1					1			
Amputation (site not stated).	Gunshot wound, forearm	1	1				1				
Amputation, hand, except thumb, at carpo-metacarpal joint.	Contused and lacerated wound, hand.	1	1				1				
Amputation (site not stated).	Osteitis of femur	1	1					1			
Amputation, knee joint	Osteo-sarcoma, tibia	1	1					1			
Do	Fracture compound, both bones, leg.	1	1					1			
Amputation, leg, middle third.	Crushing of leg, by cars	1	1					1			
Do	Fracture compound comminuted both bones, leg.	1	1					1			
Amputation, leg, lower third.	Fracture compound comminuted, ankle.	1	1						1		
Amputation, leg, lower third (Teale's).	Crushing of foot	1	1				1				
Amputation of finger	Gunshot wound	13	13				6	3		4	
	Injury other than gunshot	25	25				9	3	6	5	2
	Ankylosis	3	3				2			1	
	Contracted flexor tendon	1	1				1				
	Felon	1	1				1				
	Supernumerary	2	2				2				
	Cause not stated	3	3				3				
Amputation of toe	Gunshot wound	3	3				1	1		1	
	Injury other than gunshot	2	2					1			1
	Gangrene	1	1					1			
	Painful deformity	5	5				2	2		1	
	Overlapping toe	1	1							1	
	Hammer toe	11	11				2	4		5	
	Supernumerary	1	1					1			
	Cause not stated	1	1				1				

TABLE NO. 66.—*Surgical operations reported by medical officers as having been performed by them on officers and enlisted men of the army during the calendar year 1902*—Con.

Operation.	Disease or injury.	Cases.	Result.				Anesthetic.				
			Successful.	Partially successful.	Failure.	Died.	Chloroform.	Ether.	Chloroform and ether.	Local.	None.
	Foreign bodies.										
Incision and extraction	Bullet, 15; particles of steel, 1; needle, 2; fragment of glass, 2; encysted pebbles, 1; and splinter, 2.	23	23				5	5		10	3
	Tumors.										
Excision	Chondroma	1	1							1	
Exsection of tumor	Osteo-fibro-chondroma	1			1			1			
Exploratory operation	Angioma, congenital	1	1				1				
Excision	Bone tumor, side of head	1	1				1				
Do	Fibroma	4	4				1			3	
Do	Lipoma	9	8	1				1		8	
Do	Lymphoma	1	1							1	
Do	Papilloma	3	3							3	
Do	Pedunculated tumor	1	1							1	
Amputation	Hypertrophy of breast	1	1					1			
Enucleation 42 Incision and curettage. 5	Sebaceous cyst	47	47				2	3		34	8
Curettage	Colloid cyst	1	1							1	
Excision	Dermoid cyst	1	1					1			
Excision and drainage	Cystic tumor	19	19				1	3		15	
Excision	Wen	3	3							2	1
Do	Tumor, nature not stated	2	2					1		1	
Do	Tumor, nature not known	4	4							4	
	Miscellaneous.										
Incision and drainage	Punctured wound	5	5							4	1
Suturing	Incised wound	28	28				3			9	16
Do	Lacerated wound	74	74				2			50	22
Total cases		3,467	3,385	30	21	31	497	965	67	1,661	277

NOTE.—Spinal anesthesia was induced in 9 cases, the agent employed being tropacocaine.

TABLE NO. 67.—*Numerical view of the effect of disease and injury on United States troops serving at home and abroad in the year 1908, compared with corresponding data for the year 1907, by races.*

ABSOLUTE NUMBERS.

		Mean strength.	Admitted.			Discharged on surgeon's certificate of disability.			Died.			Total losses.			Noneffective from sickness.	
			Total.	Disease.	Injury.	Total.	Disease.	Injury.	Total.	Disease.	Injury.	Total.	Disease.	Injury.	Days treated.	Constantly noneffective.
White troops	1908	62,263	72,795	58,886	13,909	1,210	1,087	123	373	206	167	1,583	1,293	290	959,650	2,621.99
	1907	50,705	60,978	50,357	10,621	1,051	931	120	287	169	118	1,338	1,100	238	840,925	2,303.90
Colored troops	1908	3,143	4,909	4,092	817	38	28	10	41	29	12	79	57	22	62,010	169.51
	1907	3,098	4,568	3,718	850	56	48	8	32	20	12	88	68	20	65,825	180.34
Porto Rican troops	1908	564	701	658	43	4	4	.....	4	3	1	8	7	1	7,641	20.88
	1907	564	681	621	60	4	4	.....	8	7	1	12	11	1	8,725	23.90
Filipino troops	1908	5,085	5,378	4,616	762	54	53	1	43	29	14	97	82	15	65,337	178.52
	1907	4,679	5,215	4,592	623	40	39	1	27	24	3	67	63	4	48,792	133.68

PROPORTIONAL NUMBERS.

		Mean strength.	Admitted.			Discharged on surgeon's certificate of disability.			Died.			Total losses.			Constantly noneffective.	Days treated.	
			Total.	Disease.	Injury.	Total.	Disease.	Injury.	Total.	Disease.	Injury.	Total.	Disease.	Injury.		Each soldier.	Each case.
White troops	1908	62,263	1,169.15	945.76	223.39	18.81	16.90	1.91	5.80	3.20	2.60	24.61	20.10	4.51	42.11	15.42	13.18
	1907	50,705	1,202.60	993.14	209.47	20.30	17.98	2.32	5.54	3.26	2.28	25.84	21.24	4.60	45.44	16.58	13.79
Colored troops	1908	3,143	1,561.88	1,301.94	259.94	11.95	8.81	3.15	12.90	9.12	3.77	24.85	17.93	6.92	53.93	19.74	12.64
	1907	3,098	1,474.50	1,200.13	274.37	17.70	15.18	2.53	10.12	6.32	3.79	27.82	21.50	6.32	58.21	21.25	14.41
Porto Rican troops	1908	564	1,242.91	1,166.67	76.24	7.09	7.09	.....	7.09	5.32	1.77	14.18	12.41	1.77	37.02	13.55	10.90
	1907	564	1,207.45	1,101.06	106.38	7.09	7.09	.....	14.18	12.41	1.77	21.27	19.50	1.77	42.38	15.47	12.81
Filipino troops	1908	5,085	1,057.62	907.77	149.85	10.38	10.19	.19	8.26	5.57	2.69	18.64	15.76	2.88	35.11	12.85	12.15
	1907	4,679	1,114.55	981.41	133.15	8.55	8.34	.21	5.77	5.13	.64	14.32	13.47	.85	28.57	10.43	9.36

TABLE NO. 68.—*Admissions to sick report, discharges, and deaths, with ratios per 1,000 of mean strength, in which all available data for the period 1898–1907 are placed in comparison with the year 1908.*

	United States Army, 1898-1907.						American troops—Army, 1908.					
Mean strength	S. G. O. 626036 (mean annual, 62604). A. G. O. 642558 (mean annual, 64256).						S. G. O. 65406 (A. G. O. 67515).					
Causes of admission to sick report.	Admissions.		Discharges.		Deaths.		Admissions.		Discharges.		Deaths.	
	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.
Typhoid fever	8,625	13.78	42	0.07	931	1.45	215	3.29	2	0.03	21	0.31
Malarial fevers, total	188,263	300.72	181	.28	395	.61	3,030	46.33	.....	.....	2	.03
Intermittent	144,161	230.28	4	.01	12	.02	2,483	37.96	.....	.....	.....	.....
Remittent or continued	36,641	58.53	5	.01	105	.16	499	7.63	.....	.....	1	.01
Pernicious	642	1.03	1	.002	232	.36	3	.05	.....	.....	1	.01
Other malarial diseases	6,819	10.89	171	.27	46	.07	45	.69	.....	.....	.....	.....
Smallpox	531	.85	.....	.....	108	.17	15	.23	.....	.....	.....	.....
Measles	7,337	11.72	10	.02	96	.15	1,054	16.11	1	.01	8	.12
Eruptive fevers, others	998	1.59	.....	.....	6	.01	221	3.38	.....	.....	.....	.....
Diphtheria	227	.36	.....	.....	9	.01	60	.92	.....	.....	4	.06
Influenza	18,422	29.43	.....	.....	7	.01	1,956	29.91	.....	.....	1	.01
Asiatic cholera	529	.84	.....	.....	312	.49	14	.21	.....	.....	8	.12
Cholera nostras	977	1.56	.....	.....	.....	.....	3	.05	.....	.....	.....	.....
Dysentery	27,974	44.68	503	.78	940	1.46	480	7.34	11	.16	6	.09
Yellow fever	1,044	1.67	.....	.....	161	.25	5	.08	.....	.....	1	.01
Leprosy	1	.002	.....	.....	.....	.....	1	.02	.....	.....	.....	.....
Beriberi	59	.09	6	.01	9	.01	1	.02	.....	.....	.....	.....
Erysipelas	521	.83	.....	.....	12	.02	78	1.19	.....	.....	1	.01
Dengue	15,958	25.49	.....	.....	1	.002	1,204	18.41	.....	.....	.....	.....
Mumps	7,089	11.32	.....	.....	.....	.....	799	12.22	.....	.....	.....	.....
Cerebrospinal fever, including meningitis	252	.40	27	.04	132	.21	17	.26	2	.03	10	.15
Purulent infection and septicemia	127	.20	4	.01	69	.11	12	.18	1	.01	1	.01
Tuberculosis, pulmonary	2,734	4.37	1,451	2.26	405	.63	249	3.81	158	2.34	32	.47
Total venereal	103,285	164.98	1,954	3.04	32	.05	12,697	194.13	157	2.33	5	.07
Syphilis and its results	14,798	23.64	1,389	2.16	26	.04	1,726	26.39	94	1.39	5	.07
Chancroid and its results	22,507	35.95	28	.04	.....	.....	2,105	32.18	2	.03	.....	.....
Gonorrhea and its results	65,980	105.39	537	.84	6	.01	8,866	135.55	61	.90	.....	.....
Cancer and other malignant growths	138	.22	28	.04	43	.07	12	.18	1	.01	8	.12
Rheumatism, acute, articular	4,799	7.67	27	.04	7	.01	523	8.00	3	.04	1	.01
Rheumatism, subacute and chronic, articular	4,255	6.80	392	.61	1	.002	393	6.01	21	.31	.....	.....
Alcoholism and its results	15,559	24.85	93	.14	145	.23	1,921	29.42	30	.44	13	19
Insanity	1,083	1.73	882	1.37	8	.01	98	1.50	71	1.05	.....	.....
Diseases of the brain and spinal cord	2,007	3.21	435	.68	86	.13	26	.40	10	.15	1	.06

TABLE No. 68.—*Admissions to sick report, discharges, and deaths, with ratios per 1,000 of mean strength, in which all available data for the period 1898 1907 are placed in comparison with the year 1908*—Continued.

Causes of admission to sick report.	United States Army, 1898-1907.						American troops—Army, 1908.					
Mean strength	S. G. O. 626036 (mean annual, 62604). A. G. O. 642558 (mean annual, 64256).						S. G. O. 65406 (A. G. O. 67515).					
	Admissions.		Discharges.		Deaths.		Admissions.		Discharges.		Deaths.	
	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.
Tetanus	15	0.02			11	0.02	2	0.03			1	0.01
Diseases of the heart	3,431	5.48	951	1.98	221	.34	152	2.32	60	0.89	17	.25
Varicocele	2,681	1.28	76	.12			230	3.52				
Adenitis, nonvenereal	4,018	6.42	9	.01			467	7.14				
Lymphangitis	506	.81	10	.02	1	.002	25	.38				
Coryza and other diseases of the nasal fossæ	8,304	13.26	61	.10			1,351	20.66	5	.07		
Bronchitis, acute and chronic	37,227	59.46	55	.09	7	.01	2,241	34.26	7	.10	1	.01
Pneumonia (all)	2,204	3.52	14	.02	319	.50	167	2.55			26	.39
Pleurisy	2,198	3.51	69	.11	21	.03	212	3.24	7	.10	1	.01
Tonsillitis and other diseases of the pharynx	36,853	58.87	1	.002	2	.003	4,672	71.43			1	.01
Gastritis	14,340	22.91	58	.09	23	.04	794	12.14	9	.13		
Diarrhea and enteritis	116,851	186.65	145	.23	207	.32	3,484	53.27	5	.07	3	.04
Peritonitis (simple)	115	.18	7	.01	54	.08	4	.06				
Inguinal and other herniæ	3,230	5.16	629	.98	2	.003	208	1.56	34	.50	2	.03
Appendicitis	2,183	3.49	61	.10	97	.15	293	4.48	5	.07	7	.10
Diseases of the kidneys	1,705	2.72	172	.27	171	.27	116	1.77	7	.10	13	.19
Periostitis	691	1.10	8	.01	19	.03	71	1.09	2	.03		
Arthritis and synovitis	4,304	6.87	194	.30			240	3.67	13	.19		
All other diseases	277,513	44.33	4,336	6.75	595	.93	23,072	352.75	493	7.30	37	.55
Total for disease	931,163	1,487.40	12,891	20.06	5,665	8.82	62,978	962.88	1,115	16.51	235	3.48
Total for injuries	137,060	218.93	1,901	2.96	2,407	3.75	14,726	225.15	133	1.97	179	2.65
Grand total	1,068,223	1,706.33	14,792	23.02	8,072	12.56	77,704	1,188.03	1,248	18.48	414	6.12

TABLE NO. 69.—*Admissions to sick report, discharges, deaths, and noneffectiveness, with ratios per 1,000 of mean strength, for the army—officers and total enlisted—for the year 1908.*

Cause of admission to sick report.	Officers, U. S. Army.								American troops, army.							
Mean strength	S. G. O., 3,637—A. G. O., 3,920.								S. G. O., 65,406—A. G. O., 67,515.							
	Admissions.		Retirement for disability.		Deaths.		Noneffective.		Admissions.		Discharges.		Deaths.		Noneffective.	
	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.
Typhoid fever	12	3.30			2	0.51	1.39	0.38	215	3.29	2	0.03	21	0.31	37.02	0.57
Fevers, undetermined	17	4.67					.35	.10	611	9.34					9.33	.14
Malarial fevers	92	25.30					3.23	.89	3,030	46.33			2	.03	65.41	1.03
Nonmalignant infection	52	14.30					1.17	.32	2,271	34.77					44.86	.69
Intermittent	48	13.20					.81	.22	2,160	33.02					41.24	.63
Remittent or continued	4	1.10					.36	.10	114	1.74					3.62	.06
Malignant (estivo-autumnal) infection	32	8.80					1.56	.43	697	10.66			2	.03	19.63	.30
Intermittent	16	4.40					.70	.19	310	4.74					6.87	.10
Remittent or continued	16	4.40					.86	.24	384	5.87			1	.01	12.51	.19
Pernicious									3	.05			1	.01	.26	.004
Infection undetermined									14	.21					.39	.01
Malarial cachexia	8	2.20					.50	.14	45	.69					2.54	.04
Hemoglobinuric fever															.03	.0004
Smallpox	1	.27					.08	.02	15	.23					1.32	.02
Measles	13	3.58					.33	.09	1,054	16.11	1	.01	8	.12	17.78	.3
Eruptive fevers, other	8	2.20					.18	.05	221	3.38					9.05	.14
Diphtheria	2	.55					.18	.05	60	.92			1	.06	2.83	.04
Influenza	182	50.04					3.81	1.05	1,956	29.91			1	.01	31.04	.47
Asiatic cholera	1	.27			1	.26	.04	.01	11	.21			8	.12	.55	.01
Cholera nostras									3	.05					.02	.0004
Dysentery	18	4.95	2	0.51			2.35	.65	480	7.34	11	.16	6	.09	51.24	.8
Amebic	15	4.12	2	.51			2.05	.56	254	3.88	11	.16	2	.03	37.43	.5
Bacillary	1	.27					.04	.01	62	.95			4	.06	3.18	.04
Mixed infections and other dysenteries	2	.55					.27	.07	164	2.51					10.64	.16
Yellow fever									5	.08			1	.01	.50	.01
Leprosy									1	.02					1.17	.02
Beriberi									1	.02					.36	.01
Erysipelas	4	1.10					.29	.08	78	1.19			1	.01	4.98	.08
Dengue	62	17.05					1.33	.37	1,201	18.41					22.30	.33
Mumps	10	2.75					.37	.10	799	12.22					32.01	.49

TABLE NO. 69.—*Admissions to sick report, discharges, deaths, and noneffectiveness, with ratios per 1,000 of mean strength, for the army—officers and total enlisted—for the year 1908*—Continued.

Cause of admission to sick report.	Officers, U. S. Army.								American troops, army.							
Mean strength	S. G. O., 3,637—A. G. O., 3,920.								S. G. O., 65,406—A. G. O., 67,515.							
	Admissions.		Retirement for disability.		Deaths.		Noneffective.		Admissions.		Discharges.		Deaths.		Noneffective.	
	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.
Cerebrospinal meningitis, epidemic									17	0.26	2	0.03	10	0.15	1.19	0.02
Yaws (frambesia)									1	.02					.10	.002
Purulent infection and septicemia									12	.18	1	.01	1	.01	1.39	.02
Trichinosis									1	.02					.02	.0003
Tuberculosis (all)	16	4.40	6	1.00	2	0.51	9.38	2.58	295	4.51	169	2.50	36	.53	155.97	2.38
Tuberculosis, pulmonary	15	4.12	6	1.00	2	.51	8.19	2.25	249	3.81	158	2.34	32	.47	145.00	2.22
Tuberculosis of other organs	1	.27					1.19	.33	46	.70	11	.16	4	.06	10.98	.17
Venereal (all)	23	6.32					3.32	.91	12,697	194.13	157	2.33	5	.07	762.17	11.65
Syphilis and its results	4	1.10					1.53	.42	1,726	26.39	94	1.39	5	.07	161.41	2.47
Chancroid and its results	4	1.10					.48	.13	2,105	32.18	2	.03			121.35	1.86
Gonorrhea and its results	15	4.12					1.32	.36	8,866	135.55	61	.90			479.42	7.33
Cancer and other malignant growth	2	.55					.77	.21	12	.18	1	.01	8	.12	3.59	.05
Rheumatism, acute, articular	15	4.12					1.34	.37	523	8.00	3	.04	1	.01	32.84	.50
Rheumatism, subacute and chronic, articular	7	1.92	2	.51			.58	.16	393	6.01	21	.31			32.72	.50
Alcoholism and its results	28	7.70			1	.26	2.01	.55	1,924	29.42	30	.44	13	.19	25.77	.39
Insanity	2	.55	1	.26			.08	.02	98	1.50	71	1.05			19.30	.30
Epilepsy									159	2.43	70	1.01			8.60	.13
Tetanus									2	.03			1	.01	.01	.0002
Trachoma	3	.82					.32	.09	47	.72	3	.04			2.31	.04
Organic diseases of the heart	5	1.38	8	2.04	1	.26	1.12	.31	131	2.00	58	.86	15	.22	14.93	.23
Aneurism	2	.55			1	.26	.05	.02	4	.06	2	.03	3	.04	.17	.003
Filariasis									3	.05					1.56	.02
Chyluria									1	.02					.15	.002
Other filariasis									2	.03					1.41	.02
Functional diseases of the heart	3	.82					.10	.03	144	2.20	22	.33			8.51	.13
Bronchitis, acute and chronic	117	32.17					1.67	.46	2,241	34.26	7	.10	1	.01	47.60	.73
Broncho-pneumonia	3	.82					.18	.05	29	.44			2	.03	2.20	.03
Pneumonia (pneumonic fever)									138	2.11			24	.36	11.52	.18

Diarrhea and enteritis	145	39.90	3	.77			2.86	.79	3,484	53.27	5	.07	3	.04	50.69	.77
Intestinal parasites	5	1.38					.07	.02	221	3.38					5.77	.09
Teniada									82	1.25					1.30	.02
Tenia mediocanellata (or saginata)									56	.86					.96	.01
Tenia solium									22	.34					.27	.004
Tenia nana									2	.03					.03	.0005
Bothriocephalus latus									2	.03					.04	.001
Ascarida	3	.82					.06	.02	27	.41					.57	.01
Ascaris lumbricoides	3	.82					.06	.02	26	.40					.54	.01
Oxyuris vermicularis									1	.02					.03	.0005
Strongylida	2	.55					.01	.001	109	1.67					3.73	.06
Ankylostoma duodenale	2	.55					.01	.001	92	1.41					2.63	.04
Unicinaria Americana									17	.26					1.10	.02
Trichotrachelida									1	.02					.07	.001
Trichocephalus dispar									1	.02					.07	.001
Other intestinal parasites									2	.03					.09	.001
Inguinal and other hernia	14	3.85	1	.26			2.99	.82	298	4.56	34	.50	2	.03	30.55	.47
Hepatic abscess	1	.27					.45	.12	18	.28	1	.01	5	.07	4.62	.07
Appendicitis	29	7.97			1	.26	5.91	1.62	293	4.48	5	.07	7	.10	27.33	.42
Climatic bubo									7	.11					.61	.01
Tropical ulcer	1	.27					.07	.02	64	.98					3.49	.05
Jiggers (pulex penetrans)									3	.05					.04	.0005
Pemphigus contagiosus	1	.27					.01	.003	81	1.24			1	.01	2.21	.03
Dhobie itch									293	4.48					7.29	.11
Prickly heat	1	.27					.01	.002	39	.60					.61	.01
Other parasitic diseases of the skin	1	.27					.02	.004	215	3.29	2	.03			7.83	.12
Acute nephritis	3	.82					.08	.02	30	.46	5	.07	5	.07	1.90	.03
Chronic nephritis	9	2.47	4	1.02	2	.51	1.62	.45	42	.64	5	.07	8	.12	6.25	.10
Malingering									42	.64					2.13	.03
External causes, special.																
Fractures, exclusive of gunshot	27	7.42			2	.51	4.77	1.31	731	11.22	33	.49	20	.30	84.45	1.29
Dislocations	7	1.92					.30	.08	226	3.46	3	.04	1	.01	10.08	.15
Sprains and muscular strains	79	21.72					2.90	.80	4,130	63.14	4	.06			84.02	1.28
Wounds, gunshot	8	2.20			2	.51	1.30	.36	188	2.87	33	.49	56	.83	21.04	.32
Wounds other than gunshot	32	8.80					1.45	.40	3,439	52.58	16	.24	6	.09	82.94	1.27
Sunstroke									9	.14					.14	.002
Frostbite and general freezing									30	.46			3	.04	1.01	.02
Drowning					1	.26							48	.71		
Poisoning, acute	9	2.47					.08	.02	176	2.69			29	.43	2.25	.03
Venomous bites, etc	3	.82					.06	.02	84	1.28					1.65	.03
Other venomous bites, etc	3	.82					.06	.02	84	1.28					1.65	.03
Diseases and injuries grouped.																
General diseases	518	142.43	12	3.06	7	1.79	34.82	9.58	27,509	420.59	433	6.41	133	1.97	1,374.51	21.02
Epidemic diseases	406	111.63	2	.51	3	.77	14.36	3.95	11,406	174.39	16	.24	62	.92	345.30	5.28
Other general diseases	112	30.79	10	2.55	4	1.02	20.47	5.63	16,103	246.20	417	6.18	71	1.05	1,029.21	15.74

TABLE No. 69.—*Admissions to sick report, discharges, deaths, and noneffectiveness, with ratios per 1,000 of mean strength, for the army—officers and total enlisted—for the year 1908*—Continued.

	Officers, U. S. Army.								American troops, army.							
Mean strength	S. G. O., 3,637—A. G. O., 3,920.								S. G. O., 65,406—A. G. O., 67,515.							
Cause of admission to sick report.	Admissions.		Retirement for disability.		Deaths.		Noneffective.		Admissions.		Discharges.		Deaths.		Noneffective.	
	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.
Diseases and injuries grouped—Cont'd.																
Diseases of the nervous system and organs of special sense	171	47.02	14	3.57	.....	.....	13.40	3.68	2,829	43.25	259	3.84	8	0.12	148.80	2.28
Of the nervous system	97	26.67	12	3.06	.....	.....	9.76	2.68	1,248	19.08	199	2.95	6	.09	80.74	1.23
Of the eye and its adnexa	63	17.32	1	.26	.....	.....	2.96	.81	972	14.86	33	.49	.....	.....	37.20	.57
Of the ear and its adnexa	11	3.02	1	.26	.....	.....	.67	.19	609	9.31	27	.40	2	.03	30.87	.47
Diseases of the circulatory system	53	14.57	9	2.30	2	0.51	3.19	.88	1,691	25.85	92	1.36	21	.31	95.89	1.47
Diseases of the respiratory system	225	61.86	1	.26	.....	.....	5.68	1.56	4,434	67.79	37	.55	28	.41	108.37	1.66
Diseases of the digestive system	543	149.30	7	1.79	1	.26	21.40	5.89	14,685	224.52	65	.96	30	.44	293.35	4.49
Diseases of the genito-urinary system	53	14.57	6	1.53	2	.51	4.39	1.21	1,030	15.75	50	.74	13	.19	46.74	.71
Diseases of the skin and cellular tissue	105	28.87	.....	.....	.....	.....	2.66	.73	6,957	106.37	20	.30	1	.01	179.08	2.74
Diseases of the organs of locomotion	89	24.47	1	.26	.....	.....	1.03	1.11	2,310	35.32	44	.65	.....	.....	76.86	1.18
Malformations, etc	.....	.....	.....	.....	.....	.....	.....	.....	185	2.83	113	1.67	.....	.....	12.62	.19
Diseases, results of old age	.....	.....	.....	.....	.....	.....	.....	.....	2	.03	.....	.....	.....	.....	.10	.001
Ill-defined diseases	42	11.55	.....	.....	1	.26	1.51	.42	1,346	20.58	2	.03	1	.01	34.28	.52
Total for disease	1,799	494.64	50	12.76	13	3.32	91.08	25.04	62,978	962.88	1,115	16.51	235	3.48	2,370.60	36.24
External causes	294	80.84	.....	.....	6	1.53	15.89	4.37	14,726	225.15	133	1.97	179	2.65	420.90	6.44
Total for diseases and external causes	2,093	575.47	50	12.76	19	4.85	106.98	29.41	77,704	1,188.03	1,248	18.48	414	6.13	2,791.50	42.68

TABLE NO. 70.—*Admissions to sick report, discharges, deaths, and noneffectiveness with ratios per 1,000 of mean strength, for the year 1908, United States Army.*

Causes of admission to sick report.	Total, United States Army.								White, United States Army.								Colored, United States Army.							
Mean strength	S. G. O., 65,406—A. G. O., 67,515.								S. G. O., 62,263—A. G. O., 64,336.								S. G. O., 3,143—A. G. O., 3,179.							
	Admissions.		Discharges.		Deaths.		Noneffective.		Admissions.		Discharges.		Deaths.		Noneffective.		Admissions.		Discharges.		Deaths.		Noneffective.	
	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.
Typhoid fever	215	3.29	2	0.03	21	0.31	37.02	0.57	213	3.42	2	0.03	21	0.33	36.66	0.59	2	0.64					0.36	0.11
Fevers, undetermined	611	9.34					9.33	.14	500	8.03					8.33	.13	111	35.32					1.00	.32
Malarial fevers	3,030	46.33			2	.03	67.44	1.03	2,836	45.55			1	.02	63.44	1.02	194	61.72			1	.31	4.00	1.27
Nonmalignant infection	2,274	34.77					44.86	.69	2,131	34.23					42.39	.68	143	45.50					2.47	.79
Intermittent	2,160	33.02					41.24	.63	2,031	32.62					39.02	.63	129	41.04					2.22	.71
Remittent or continued	114	1.74					3.62	.06	100	1.61					3.37	.05	14	4.45					.25	.08
Malignant (estivo-autumnal) infection	697	10.66			2	.03	19.63	.30	648	10.41			1	.02	18.11	.29	49	15.59			1	.31	1.52	.48
Intermittent	310	4.74					6.87	.10	304	4.88					6.64	.11	6	1.91					.23	.07
Remittent or continued	384	5.87			1	.01	12.51	.19	342	5.49			1	.02	11.28	.18	42	13.36					1.24	.39
Pernicious	3	.05			1	.01	.26	.004	2	.03					.21	.003	1	.32			1	.31	.05	.02
Infection undetermined	14	.21					.39	.006	12	.19					.37	.01	2	.64					.02	.01
Malarial cachexia	45	.69					2.54	.04	45	.72					2.54	.04								
Hemoglobinuric fever							.03	.0004							.03	.0004								
Smallpox	15	.23					1.32	.02	12	.19					1.05	.02	3	.95					.27	.08
Measles	1,054	16.11	1	.01	8	.12	47.78	.73	1,045	16.78	1	.02	8	.12	47.51	.76	9	2.86					.27	.09
Eruptive fevers, others	221	3.38					9.05	.14	220	3.53					9.01	.14	1	.32					.04	.01
Diphtheria	60	.92			4	.06	2.83	.04	60	.96			4	.06	2.83	.05								
Influenza	1,956	29.91			1	.01	31.04	.47	1,941	31.17			1	.02	30.88	.50	15	4.77					.16	.05
Asiatic cholera	14	.21			8	.12	.55	.01	9	.14			6	.09	.30	.005	5	1.59			2	.63	.25	.08
Cholera nostras	3	.05					.02	.0004	3	.05					.02	.0004								
Dysentery	480	7.34	11	.16	6	.09	51.24	.78	420	6.75	11	.17	6	.09	47.25	.76	60	19.09					4.00	1.27
Amebic	254	3.88	11	.16	2	.03	37.43	.57	226	3.63	11	.17	2	.03	35.30	.57	28	8.91					2.12	.68
Bacillary	62	.95			4	.06	3.18	.05	53	.85			4	.06	2.28	.04	9	2.86					.90	.29
Mixed infections and other dysenteries	164	2.51					10.64	.16	141	2.26					9.66	.16	23	7.32					.98	.31
Yellow fever	5	.08			1	.01	.50	.01	5	.08			1	.02	.50	.01								
Leprosy	1	.02					1.47	.02	1	.02					1.47	.02								
Beriberi	1	.02					.36	.01	1	.02					.36	.01								
Erysipelas	78	1.19			1	.01	4.98	.08	75	1.20			1	.02	4.87	.08	3	.95					.10	.03
Dengue	1,204	18.41					22.30	.34	736	11.82					15.13	.24	468	148.90					7.18	2.29
Mumps	799	12.22					32.01	.49	761	12.22					30.91	.50	38	12.09					1.10	.35

TABLE No. 70.—*Admissions to sick report, discharges, deaths, and noneffectiveness with ratios per 1,000 of mean strength, for the year 1908, United States Army*—Continued.

Causes of admission to sick report.	Total, United States Army.								White, United States Army.								Colored, United States Army.							
Mean strength	S. G. O., 65,406—A. G. O., 67,515.								S. G. O., 62,263—A. G. O., 64,336.								S. G. O., 3,143—A. G. O., 3,179.							
	Admissions.		Discharges.		Deaths.		Noneffective.		Admissions.		Discharges.		Deaths.		Noneffective.		Admissions.		Discharges.		Deaths.		Noneffective.	
	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.
Cerebrospinal meningitis, epidemic	17	0.26	2	.03	10	0.15	1.19	0.02	16	0.26	2	0.03	9	0.14	1.19	0.02	1	0.32			1	0.31	0.01	0.002
Yaws (frambesia)	1	.02					.10	.002	1	.02					.10	.002								
Purulent infection and septicemia	12	.18	1	.01	1	.01	1.39	.02	9	.14	1	.02			.73	.01	3	.95			1	.31	.65	.21
Trichinosis	1	.02					.02	.0003	1	.02					.02	.0003								
Tuberculosis (all)	295	4.51	169	2.50	36	.53	155.97	2.38	271	4.35	159	2.47	28	.44	143.81	2.31	24	7.64	10	3.15	8	2.52	12.17	3.87
Tuberculosis, pulmonary	249	3.81	158	2.34	32	.47	145.00	2.22	228	3.66	149	2.32	25	.39	133.60	2.15	21	6.68	9	2.83	7	2.20	11.40	3.63
Tuberculosis of other organs	46	.70	11	.16	4	.06	10.98	.17	43	.69	10	.16	3	.05	10.21	.17	3	.95	1	.31	1	.31	.77	.24
Venereal (all)	12,697	194.13	157	2.33	5	.07	762.17	11.65	11,603	186.35	156	2.42	5	.08	712.08	11.44	1,094	348.08	1	.31			50.10	15.94
Syphilis and its results	1,726	26.39	94	1.39	5	.07	161.41	2.47	1,592	25.57	94	1.46	5	.08	153.40	2.46	134	42.64					8.00	2.55
Chancroid and its results	2,105	32.18	2	.03			121.35	1.86	1,863	29.92	1	.02			109.54	1.76	242	77.00	1	.31			11.81	3.76
Gonorrhea and its results	8,866	135.55	61	.90			479.42	7.33	8,148	130.87	61	.95			449.14	7.21	718	228.44					30.28	9.63
Cancer and other malignant growths	12	.18	1	.01	8	.12	3.59	.05	11	.18	1	.02	8	.12	3.51	.06	1	.32					.08	.03
Rheumatism, acute, articular	523	8.00	3	.04	1	.01	32.84	.50	481	7.72	3	.05	1	.02	31.34	.50	42	13.36					1.51	.48
Rheumatism, subacute and chronic, articular	393	6.01	21	.31			32.72	.50	351	5.64	21	.33			30.10	.48	42	13.36					2.63	.84
Alcoholism and its results	1,924	29.42	30	.44	13	.19	25.77	.39	1,888	30.32	30	.47	12	.19	25.22	.41	36	11.45			1	.31	.55	.17
Insanity	98	1.50	71	1.05			19.30	.30	94	1.51	70	1.09			17.20	.28	4	1.27	1	.31			2.10	.67
Epilepsy	159	2.43	70	1.04			8.60	.13	156	2.51	69	1.07			8.56	.14	3	.95	1	.31			.04	.01
Tetanus	2	.03			1	.01	.01	.0002	2	.03			1	.02	.01	.0002								
Trachoma	47	.72	3	.04			2.31	.04	47	.76	3	.05			2.31	.04								
Organic diseases of the heart	131	2.00	58	.86	15	.22	14.93	.23	121	1.94	57	.59	12	.19	12.83	.21	10	3.18	1	.31	3	.94	2.10	.67
Aneurism	4	.06	2	.03	3	.04	.17	.003	3	.05	2	.03	2	.03	.15	.002	1	.32			1	.31	.02	.01
Filariasis	3	.05					1.56	.02	1	.02					.15	.002	2	.64					1.41	.45
Chyluria	1	.02					.15	.002	1	.02					.15	.002								
Other filariasis	2	.03					1.41	.02									2	.64					1.41	.45
Functional diseases of the heart	144	2.20	22	.33			8.51	.13	140	2.25	22	.34			8.28	.13	4	1.27					.23	.07
Bronchitis, acute and chronic	2,241	34.26	7	.10	1	.01	47.60	.73	2,098	33.70	7	.11	1	.02	45.09	.72	143	45.50					2.51	.80
Broncho-pneumonia	29	.44			2	.03	2.20	.03	28	.45			2	.03	2.08	.03	1	.32					.12	.04
Pneumonia(pneumonic fever)	138	2.11			24	.36	11.52	.18	133	2.14			22	.34	11.09	.18	5	1.59			2	.63	.43	.14
Diarrhea and enteritis	3,484	53.27	5	.07	3	.04	50.69	.77	3,309	53.15	5	.08	1	.02	47.84	.77	175	55.68			2	.63	2.84	.90

Intestinal parasites	221	3.38					5.77	.09	214	3.44							5.57	.09	7	2.23					.20	.06				
Taeniada	82	1.25					1.30	.02	81	1.30							1.26	.02	1	.32					.04	.01				
Taenia mediocanellata (or saginata)	56	.86					.96	.01	55	.88							.92	.01	1	.32					.04	.01				
Taenia solium	22	.34					.27	.004	22	.35							.27	.004												
Taenia nana	2	.03					.03	.0005	2	.03							.03	.0005												
Bothriocephalus latus	2	.03					.04	.001	2	.03							.04	.001												
Ascarida	27	.41					.57	.01	23	.37							.53	.01	4	1.27					.04	.01				
Ascaris lumbricoides	26	.40					.54	.01	22	.35							.50	.01	4	1.27					.04	.01				
Oxyuris vermicularis	1	.02					.03	.0005	1	.02							.03	.0005												
Strongylida	109	1.67					3.73	.06	107	1.72							3.61	.06	2	.64					.12	.04				
Ankylostoma duodenale	92	1.41					2.63	.04	92	1.48							2.63	.04												
Uncinaria Americana	17	.26					1.10	.02	15	.24							.98	.02	2	.64					.12	.04				
Trichotrachelida	1	.02					.07	.001	1	.02							.07	.001												
Trichocephalus dispar	1	.02					.07	.001	1	.02							.07	.001												
Other intestinal parasites	2	.03					.09	.001	2	.03							.09	.001												
Inguinal and other hernia	298	4.56	34	.59	2	.03	30.55	.47	286	4.59	34	.53	2	.03			28.82	.46	12	3.82					1.73	.55				
Hepatic abscess	18	.28	1	.01	5	.07	4.62	.07	16	.26	1	.02	5	.08			3.99	.06	2	.64					.63	.20				
Appendicitis	293	4.48	5	.07	7	.10	27.33	.42	284	4.56	5	.08	6	.09			26.60	.43	9	2.86			1	.31	.72	.23				
Climatic bubo	7	.11					.61	.01	6	.10							.55	.01	1	.32					.06	.02				
Tropical ulcer	64	.98					3.49	.05	59	.95							3.42	.05	5	1.59					.07	.02				
Jiggers (pulex penetrans)	3	.05					.04	.0005	3	.05							.04	.001												
Pemphigus contagiosus	81	1.24			1	.01	2.21	.03	80	1.28			1	.02			2.19	.04	1	.32					.02	.01				
Dhobie itch	293	4.48					7.29	.11	235	3.77							5.96	.10	58	15.45					1.33	.42				
Prickly heat	39	.60					.61	.01	38	.61							.61	.01	1	.32					.005	.002				
Other parasitic diseases of the skin	215	3.29	2	.03			7.83	.12	209	3.36	2	.03					7.72	.12	6	1.91					.11	.04				
Acute nephritis	30	.46			5	.07	1.90	.03	29	.47			5	.08			1.57	.03	1	.32					.33	.10				
Chronic nephritis	42	.64	5	.07	8	.12	6.25	.10	40	.64	5	.08	6	.09			5.64	.09	2	.64			2	.63	.61	.19				
Malingering	42	.64					2.13	.03	39	.63							2.08	.03	3	.95					.05	.02				
External causes, special.																														
Fractures, exclusive of gunshot	734	11.22	33	.49	20	.30	84.45	1.29	711	11.42	31	.48	19	.30			81.32	1.31	23	7.32	2	.63	1	.31	3.13	1.00				
Dislocations	226	3.46	3	.04	1	.01	10.08	.15	211	3.39	3	.05	1	.02			9.11	.15	15	4.77					.97	.31				
Sprains and muscular strains	4,130	63.14	4	.06			84.02	1.28	3,923	63.01	4	.06					80.16	1.29	207	65.86					3.86	1.23				
Wounds, gunshot	188	2.87	33	.49	56	.83	21.04	.32	174	2.79	28	.44	51	.79			18.17	.29	14	4.45	5	1.57	5	1.57	2.87	.91				
Wounds other than gunshot	3,439	52.58	16	.24	6	.09	82.94	1.27	3,260	52.36	16	.25	5	.08			78.86	1.27	179	56.95			1	.31	4.09	1.30				
Sunstroke	9	.14					.14	.002	9	.14							.14	.002												
Frostbite and general freezing	30	.46			3	.04	1.01	.02	30	.48			3	.05			1.01	.02												
Drowning					48	.71							43	.67									5	1.57						
Poisoning, acute	176	2.69			29	.43	2.25	.03	164	2.63			29	.45			2.13	.03	12	3.82					.12	.04				
Venomous bites, etc	84	1.28					1.65	.03	71	1.14							1.30	.02	13	4.14					.35	.11				
Diseases and injuries grouped.																														
General diseases	27,509	420.59	433	6.41	133	1.97	1,374.51	21.02	25,433	408.48	421	6.54	118	1.83	1,287.55	20.68	2,076	660.52	12	3.77	15	4.72	86.96	27.67						
Epidemic diseases	11,406	174.39	16	.24	62	.92	345.30	5.28	10,586	170.02	16	.25	58	.90	327.31	5.26	820	260.90			4	1.26	17.96	5.71						
Other general diseases	16,103	246.20	417	6.18	71	1.05	1,029.21	15.74	14,847	238.46	405	6.30	60	.93	960.22	15.42	1,256	399.62	12	3.77	11	3.46	69.00	21.95						

TABLE NO. 70.—*Admissions to sick report, discharges, deaths, and noneffectiveness with ratios per 1,000 of mean strength, for the year 1908, United States Army*—Continued.

Causes of admission to sick report.	Total, United States Army. Mean strength: S. G. O., 65,406—A. G. O., 67,515.								White, United States Army. Mean strength: S. G. O., 62,263—A. G. O., 64,336.								Colored, United States Army. Mean strength: S. G. O., 3,143—A. G. O., 3,179.							
	Admissions.		Discharges.		Deaths.		Noneffective.		Admissions.		Discharges.		Deaths.		Noneffective.		Admissions.		Discharges.		Deaths.		Noneffective.	
	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.
Diseases and injuries grouped—Cont'd.																								
Diseases of the nervous system and organs of special sense	2,829	43.25	259	3.84	8	0.12	148.80	2.28	2,662	42.75	251	3.90	7	0.11	139.36	2.24	167	53.13	8	2.52	1	0.31	9.45	3.01
Of the nervous system	1,248	19.08	199	2.95	6	.09	80.74	1.23	1,157	18.58	197	3.06	5	.08	75.33	1.21	91	28.95	2	.63	1	.31	5.41	1.72
Of the eye and its adnexa	972	14.86	33	.49			37.20	.57	918	14.74	27	.42			33.74	.54	54	17.18	6	1.89			3.46	1.10
Of the ear and its adnexa	609	9.31	27	.40	2	.03	30.87	.47	587	9.43	27	.42	2	.03	30.30	.49	22	7.00					.58	.18
Diseases of the circulatory system	1,691	25.85	92	1.36	21	.31	95.89	1.47	1,583	25.42	91	1.41	17	.26	88.92	1.43	108	34.36	1	.31	4	1.26	6.96	2.21
Diseases of the respiratory system	4,434	67.79	37	.55	28	.41	108.37	1.66	4,184	67.20	36	.56	26	.40	103.24	1.66	250	79.54	1	.31	2	.63	5.13	1.63
Diseases of the digestive system	14,685	224.52	65	.96	30	.44	293.35	4.49	14,008	224.98	65	1.01	26	.40	278.82	4.48	677	215.40			4	1.26	14.54	4.62
Diseases of the genito-urinary system	1,030	15.75	50	.74	13	.19	46.74	.71	975	15.66	48	.75	11	.17	43.06	.69	55	17.50	2	.63	2	.63	3.68	1.17
Diseases of the skin and cellular tissue	6,957	106.37	20	.30	1	.01	179.08	2.74	6,520	104.72	19	.30	1	.02	168.28	2.70	437	139.04	1	.31			10.80	3.44
Diseases of the organs of locomotion	2,310	35.32	44	.65			76.86	1.18	2,144	34.43	43	.67			72.37	1.16	166	52.82	1	.31			4.49	1.43
Malformations, etc	185	2.83	113	1.67			12.62	.19	182	2.92	111	1.73			12.01	.19	3	.95	2	.63			.61	.19
Diseases, results of old age	2	.03					.10	.001	2	.03					.10	.002								
Ill-defined diseases	1,346	20.58	2	.03	1	.01	34.28	.52	1,193	19.16	2	.03			32.25	.52	153	48.68			1	.31	2.04	.65
Total for disease	62,978	962.88	1,115	16.51	235	3.48	2,370.60	36.24	58,886	945.76	1,087	16.90	206	3.20	2,225.96	35.75	4,092	1,301.94	28	8.81	29	9.12	144.65	46.02
External causes	14,726	225.15	133	1.97	179	2.65	420.90	6.44	13,909	223.39	123	1.91	167	2.60	396.04	6.36	817	259.94	10	3.15	12	3.77	24.86	7.91
Total for disease and external causes	77,704	1,188.03	1,248	18.48	414	6.13	2,791.50	42.68	72,795	1,169.15	1,210	18.81	373	5.80	2,621.99	42.11	4,909	1,561.88	38	11.95	41	12.90	169.51	53.93
Subclassification (repeated above):																								
Suicide					39	.58																		
Homicide					22	.33																		

TABLE No. 71.—*Admissions to sick report, discharges, deaths, and noneffectiveness with ratios per 1,000 of mean strength, for the year 1908, United States, continental (excluding Alaska).*

Causes of admission to sick report.	United States, continental (excluding Alaska), total.								United States, continental (excluding Alaska), white.								United States, continental (excluding Alaska), colored.							
Mean strength	S. G. O., 46,316—A. G. O., 48,053.								S. G. O., 45,592—A. G. O., 47,329.								S. G. O., 724—A. G. O., 724.							
	Admissions.		Discharges.		Deaths.		Noneffective.		Admissions.		Discharges.		Deaths.		Noneffective.		Admissions.		Discharges.		Deaths.		Noneffective.	
	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.
Typhoid fever	136	2.94	2	0.04	110.23		23.22	0.50	135	2.96	2	0.04	11	0.23	22.87	0.50	1	1.38					0.35	0.48
Fevers, undetermined	176	3.80					3.02	.07	174	3.82					3.00	.07	2	2.76					.02	.03
Malarial fevers	1,236	26.69					26.97	.58	1,227	26.91					26.84	.59	9	12.43					.13	.18
Nonmalignant infection	1,136	24.53					22.81	.49	1,127	24.71					22.68	.50	9	12.43					.13	.18
Intermittent	1,081	23.34					21.11	.46	1,073	23.53					21.01	.46	8	11.05					.10	.14
Remittent or continued	55	1.19					1.70	.04	54	1.18					1.67	.04	1	1.38					.03	.04
Malignant (estivo-autumnal) infection	78	1.68					3.46	.07	78	1.71					3.46	.08								
Intermittent	36	.78					1.44	.03	36	.79					1.44	.03								
Remittent or continued	41	.89					2.00	.04	41	.90					2.00	.04								
Pernicious	1	.02					.02	.0004	1	.02					.02	.0004								
Infection undetermined	7	.15					.09	.002	7	.15					.09	.002								
Malarial cachexia	15	.32					.58	.01	15	.33					.58	.01								
Hemoglobinuric fever							.03	.001							.03	.001								
Smallpox	12	.26					1.07	.02	11	.24					1.03	.02	1	1.38					.04	.06
Measles	920	19.86	1	.02	8	.17	40.92	.88	920	20.18	1	.02	8	.17	40.92	.90								
Eruptive fevers, others	215	4.64					8.80	.19	214	4.69					8.77	.19	1	1.38					.04	.05
Diphtheria	55	1.19			4	.08	2.64	.06	55	1.21			4	.08	2.64	.06								
Influenza	1,898	40.98			1	.02	29.84	.64	1,883	41.28			1	.02	29.69	.65	15	20.72					.16	.22
Cholera nostras	1	.02					.01	.0002	1	.02					.01	.0002								
Dysentery	113	2.44	8	.17	1	.02	15.43	.33	106	2.32	8	.17	1	.02	14.89	.32	7	9.67					.55	.75
Amebic	76	1.64	8	.17			12.80	.28	69	1.51	8	.17			12.35	.27	7	9.67					.46	.63
Bacillary	8	.17			1	.02	.20	.004	8	.18			1	.02	.20	.004								
Mixed infections and other dysenteries	29	.63					2.43	.05	29	.64					2.34	.05							.09	.12
Leprosy	1	.02					1.47	.03	1	.02					1.47	.03								

TABLE No. 71.—*Admissions to sick report, discharges, deaths, and noneffectiveness with ratios per 1,000 of mean strength, for the year 1908, United States, continental (excluding Alaska)*—Continued.

Causes of admission to sick report.	United States, continental (excluding Alaska), total.								United States, continental (excluding Alaska), white.								United States, continental (excluding Alaska), colored.							
Mean strength	S. G. O., 46,316—A. G. O., 48,053.								S. G. O., 45,592—A. G. O., 47,329.								S. G. O., 724—A. G. O., 724.							
	Admissions.		Discharges.		Deaths.		Noneffective.		Admissions.		Discharges.		Deaths.		Noneffective.		Admissions.		Discharges.		Deaths.		Noneffective.	
	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.
Erysipelas	64	1.38					4.21	0.09	63	1.38					4.19	0.09	1	1.38					0.02	0.03
Dengue	3	.06					.08	.001	3	.07					.08	.002								
Mumps	659	14.23					26.43	.57	658	14.43					26.39	.58	1	1.38					.04	.06
Cerebrospinal meningitis, epidemic	13	.28	1	.02	7	.15	.93	.02	13	.33	1	.02	7	.15	.93	.02								
Purulent infection and septicemia	8	.17	1	.02	1	.02	.94	.02	7	.15	1	.02			.70	.02	1	1.38			1	1.38	.24	.33
Trichinosis	1	.02					.02	.0004	1	.02					.02	.0004								
Tuberculosis (all)	189	4.08	133	2.77	19	.40	139.83	3.02	183	4.01	127	2.68	19	.40	130.71	2.86	6	8.29	6	8.29			9.12	12.59
Tuberculosis, pulmonary	155	3.35	123	2.56	16	.33	130.47	2.82	151	3.31	118	2.49	16	.34	121.95	2.67	4	5.52	5	6.90			8.52	11.76
Tuberculosis of other organs	34	.73	10	.21	3	.06	9.36	.20	32	.70	9	.19	3	.06	8.76	.19	2	2.76	1	1.38			.60	.83
Venereal diseases (all)	8,098	174.84	131	2.73	2	.04	492.24	10.63	7,894	173.14	130	2.75	2	.04	482.09	10.57	204	281.77	1	1.38			10.15	14.02
Syphilis and its results	1,072	23.15	78	1.62	2	.04	100.33	2.17	1,024	22.46	78	1.64	2	.04	97.83	2.14	48	66.30					2.50	3.46
Chancroid and its results	1,306	28.20	2	.04			81.21	1.75	1,260	27.64	1	.02			78.04	1.71	46	63.54	1	1.38			3.17	4.38
Gonorrhea and its results	5,720	123.50	51	1.06			310.70	6.71	5,610	123.05	51	1.08			306.22	6.72	110	151.93					4.48	6.18
Cancer and other malignant growths	5	.11			3	.06	2.15	.05	5	.11			3	.06	2.15	.04								
Rheumatism, acute, articular	421	9.09	2	.04	1	.02	26.36	.57	409	8.97	2	.04	1	.02	25.99	.57	12	16.57					.37	.51
Rheumatism, subacute and chronic, articular	307	6.63	21	.44			26.12	.56	306	6.71	21	.44			26.09	.57	1	1.38					.03	.05
Alcoholism and its results	1,404	30.31	17	.35	8	.17	18.31	.40	1,389	30.47	17	.36	8	.17	18.14	.40	15	20.72					.17	.24
Insanity	73	1.58	57	1.19			14.24	.31	72	1.58	57	1.20			12.92	.28	1	1.38					1.32	1.82
Epilepsy	133	2.87	61	1.27			6.57	.14	131	2.87	60	1.27			6.54	.14	2	2.76	1	1.38			.03	.05
Tetanus																								
Trachoma	41	.89	3	.06			1.60	.03	41	.90	3	.06			1.60	.04								
Organic diseases of the heart	104	2.25	53	1.10	10	.21	11.60	.25	102	2.24	52	1.10	10	.21	10.74	.24	2	2.76	1	1.38			.86	1.19

Aneurism	1	.02	2	.04	1 .02	.11	.002	1	.02	2	.04	1 .02	.11	.002						
Filariasis	1	.02				.59	.03	1	.02				.15	.003					.44	.60
Lymphatic varix						.003							.003							
Chyluria	1	.02				.15	.003	1	.02				.15	.003						
Others, filariasis						.44	.01												.44	.60
Functional diseases of the heart	102	2.20				6.10	.13	102	2.24				6.10	.13						
Bronchitis, acute and chronic	1,677	36.21	7	.15	1 .02	34.16	.74	1,656	36.32	7	.15	1 .02	33.83	.74	21	29.01			.34	.46
Broncho-pneumonia	26	.56			2 .04	1.96	.04	25	.55			2 .04	1.84	.04	1	1.38			.12	.17
Pneumonia (pneumonic fever	119	2.57			21 .44	9.81	.21	116	2.54			21 .44	9.41	.21	3	4.14			.40	.56
Diarrhea and enteritis	2,153	46.49	5	.10	2 .04	25.39	.55	2,124	46.59	5	.11	1 .02	24.90	.54	29	40.06		1 1.38	.49	.68
Intestinal parasites	97	2.09				2.09	.05	97	2.13				2.09	.04						
Teniada	61	1.32				.88	.02	61	1.34				.88	.02						
Tenia mediocanellata (or saginata)	41	.89				.62	.01	41	.90				.62	.01						
Tenia solium	19	.41				.25	.005	19	.42				.25	.005						
Bothriocephalus latus	1	.02				.01	.0002	1	.02				.01	.0002						
Ascarida	3	.06				.10	.002	3	.06				.10	.002						
Ascaris lumbricoides	2	.04				.07	.002	2	.04				.07	.002						
Oxyuris vermicularis	1	.02				.03	.001	1	.02				.03	.001						
Strongylida	31	.67				.96	.02	31	.68				.96	.02						
Ankylostoma duodenale	23	.50				.69	.01	23	.50				.69	.02						
Uncinaria Americana	8	.17				.27	.01	8	.18				.27	.01						
Trichotrachelida	1	.02				.07	.002	1	.02				.07	.002						
Trichocephalus dispar	1	.02				.07	.002	1	.02				.07	.002						
Other intestinal parasites	1	.02				.08	.002	1	.02				.08	.002						
Inguinal and other herniæ	238	5.14	30	.62	1 .02	23.67	.51	236	5.18	30	.63	1 .02	23.24	.51	2	2.76			.43	.59
Hepatic abscess	10	.22	1	.02	5 .10	3.30	.07	9	.20	1	.02	5 .11	2.70	.06	1	1.38			.60	.83
Appendicitis	188	4.06	4	.08	5 .10	17.21	.37	185	4.06	4	.08	5 .11	17.15	.38	3	4.14			.06	.08
Tropical ulcer	13	.28				1.37	.03	13	.29				1.37	.03						
Jiggers (pulex penetrans)	3	.06				.04	.001	3	.07				.04	.001						
Pemphigus contagiosus	4	.09			1 .02	.23	.005	4	.09			1 .02	.23	.005						
Dhobie itch	23	.50				.74	.02	21	.46				.70	.02	2	2.76			.04	.06
Prickly heat	23	.50				.40	.01	23	.50				.40	.01						
Other parasitic diseases of the skin	136	2.94	2	.04		5.42	.12	132	2.90	2	.04		5.35	.12	4	5.52			.07	.10
Acute nephritis	25	.54			3 .06	1.31	.03	25	.55			3 .06	1.34	.03						
Chronic nephritis	34	.73	4	.08	6 .12	4.46	.10	34	.75	4	.08	5 .11	4.35	.10				1 1.38	.11	.15
Malingering	25	.54				.72	.02	22	.48				.67	.01	3	4.14			.05	.07
External causes, special.																				
Fractures, exclusive of gunshot	539	11.64	24	.50	13 .27	62.53	1.35	535	11.73	23	.49	12 .25	62.07	1.36	4	5.52	1	1.38 1 1.38	.46	.64
Dislocations	153	3.30	1	.02		6.13	.13	153	3.36	1	.02		6.13	.13						
Sprains and muscular strains	3,062	66.11	3	.06		62.17	1.34	3,023	66.30	3	.06		61.56	1.35	39	53.86			.61	.85

TABLE No. 71.—*Admissions to sick report, discharges, deaths, and noneffectiveness with ratios per 1,000 of mean strength, for the year 1908, United States, continental (excluding Alaska)*—Continued.

Causes of admission to sick report.	United States, continental (excluding Alaska), total.								United States, continental (excluding Alaska), white.								United States, continental (excluding Alaska), colored.							
Mean strength	S. G. O., 66,316—A. G. O., 48,053.								S. G. O., 45,592—A. G. O., 47,329.								S. G. O., 724—A. G. O., 724.							
	Admissions.		Discharges.		Deaths.		Noneffective.		Admissions.		Discharges.		Deaths.		Noneffective.		Admissions.		Discharges.		Deaths.		Noneffective.	
	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.
External causes, special—Con.																								
Wounds, gunshot	136	2.94	25	0.52	32	0.67	15.72	0.34	134	2.94	25	0.53	32	0.68	14.14	0.31	2	2.76					1.58	2.18
Wounds other than gunshot	2,496	53.87	12	.25	2	.04	60.72	1.31	2,465	56.06	12	.25	2	.04	60.05	1.32	31	42.82					.66	.92
Sunstroke	5	.11					.09	.002	5	.11					.09	.002								
Frostbite and general freezing	26	.56			2	.04	.90	.02	26	.57			2	.04	.90	.02								
Drowning					30	.62							29	.61							1	1.38		
Poisoning, acute	68	1.47			18	.37	.91	.02	67	1.47			18	.38	.89	.02	1	1.38					.02	.03
Venomous bites, etc	48	1.04					1.17	.02	44	.97					.92	.02	4	5.52					.26	.36
Diseases and injuries grouped.																								
General diseases	18,123	391.29	341	7.10	71	1.48	930.62	20.10	17,836	391.21	333	7.04	70	1.48	908.39	19.92	287	396.41	8	11.05	1	1.38	22.23	30.72
Epidemic diseases	7,521	162.38	12	.25	32	.67	215.21	4.65	7,478	164.02	12	.25	32	.68	213.81	4.69	43	59.39					1.40	1.94
Other general diseases	10,602	228.91	329	6.85	39	.81	715.41	15.45	10,358	227.19	321	6.78	38	.80	694.57	15.24	244	337.02	8	11.05	1	1.38	20.83	28.78
Diseases of the nervous system and organs of special sense	1,947	42.04	216	4.50	6	.12	101.75	2.20	1,922	42.16	215	4.54	6	.13	99.16	2.18	25	34.53	1	1.38			2.60	3.58
Of the nervous system	854	18.44	166	3.45	4	.08	55.90	1.21	843	18.49	165	3.49	4	.08	54.08	1.19	11	15.19	1	1.38			1.83	2.53
Of the eye and its adnexa	713	15.39	24	.50			25.63	.55	700	15.35	24	.51			24.87	.55	13	17.96					.76	1.05
Of the ear and its adnexa	380	8.20	26	.54	2	.04	20.21	.44	379	8.31	26	.55	2	.04	20.21	.44	1	1.38					.003	.004
Diseases of the																								
Circulatory system	1,092	23.58	83	1.73	13	.27	64.13	1.38	1,074	23.56	82	1.73	13	.27	62.44	1.37	18	24.86	1	1.38			1.69	2.34
Respiratory system	3,407	73.56	30	.62	25	.52	80.92	1.75	3,369	73.90	29	.61	25	.53	79.71	1.75	38	52.49	1	1.38			1.21	1.67
Digestive system	10,551	227.80	58	1.21	24	.50	196.38	4.24	10,429	228.75	58	1.23	22	.46	192.91	4.23	122	168.51			2	2.76	3.17	4.79

Genito-urinary system	724	15.63	44	.92	9	.19	32.60	.70	716	15.70	44	.93	8	.17	31.91	.70	28	11.05			1	1.38	.69	.95
Skin and cellular tissue	4,316	93.18	18	.37	1	.02	112.89	2.44	4,258	93.40	18	.38	1	.02	111.16	2.44	58	80.11					1.74	2.40
Organs of locomotion	1,743	37.63	37	.77			56.93	1.23	1,703	37.35	37	.78			55.68	1.22	40	55.25					1.26	1.74
Malformations, etc	141	3.04	91	1.89			9.30	.20	139	3.05	90	1.90			8.72	.19	2	2.76	1	1.38			.58	.80
Diseases, results of old age	1	.02					.60	.001	1	.02					.06	.001								
Ill-defined diseases	654	14.12	2	.04			18.18	.39	644	14.13	2	.04			17.97	.39	10	13.81					.20	.28
Total for disease	42,699	921.91	920	19.15	149	3.10	1,603.75	34.63	42,091	923.21	908	19.18	145	3.06	1,568.09	34.39	608	839.78	12	16.57	4	5.52	35.67	49.26
External causes	10,499	226.68	106	2.21	108	2.25	304.18	6.57	10,366	227.36	103	2.18	106	2.24	298.19	6.54	133	183.70	3	4.14	2	2.76	5.99	8.27
Total for disease and external causes	53,198	1,148.59	1,026	21.35	257	5.35	1,907.93	41.19	52,457	1,150.57	1,011	21.36	251	5.30	1,866.28	40.93	741	1,023.48	15	20.72	6	8.29	41.65	57.53
Subclassification (repeated above):																								
Suicide					25	.52							25	.53							1	1.38		
Homicide					11	.23							10	.21										

TABLE No. 72.—*Admissions to sick report, discharges, deaths, and noneffectiveness with ratios per 1,000 of mean strength, for the year 1908—Alaska, Cuba, and Hawaii.*

Causes of admission to sick report.	Alaska.								Cuba.								Hawaii.							
Mean strength	S. G. O., 1015—A. G. O., 1090.								S. G. O., 4694—A. G. O., 4752.								S. G. O., 255—A. G. O., 281.							
	Admissions.		Discharges.		Deaths.		Noneffective.		Admissions.		Discharges.		Deaths.		Noneffective.		Admissions.		Discharges.		Deaths.		Noneffective.	
	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.
Typhoid fever	1	0.99					0.11	0.10	40	8.52			5	1.05	8.78	1.87								
Fevers, undetermined	2	1.97					.01	.01	127	27.06					2.28	.49	2	7.84					0.06	0.24
Malarial fevers	4	3.94					.11	.11	184	39.20					6.04	1.29								
Nonmalignant infection							.11	.11	140	29.82					4.12	.88								
Intermittent	4	3.94					.11	.11	123	26.20					3.19	.68								
Remittent or continued									17	3.62					.93	.20								
Malignant (estivo-autumnal) infection									42	8.95					1.69	.36								
Intermittent									12	2.56					.29	.06								
Remittent or continued									30	6.39					1.40	.30								
Infection, undetermined									2	.42					.23	.05								
Measles									39	8.31					1.81	.39	2	7.84					.17	.68
Eruptive fevers, others									2	.42					.09	.03	1	3.92					.11	.42
Diphtheria									5	1.07					.19	.04								
Influenza	9	8.87					.08	.08	19	4.05					.54	.12								
Cholera nostras									1	.21					.01	.001								
Dysentery	3	2.96					.10	.09	32	6.82	1	0.21			1.92	.41	1	3.92					.02	.06
Amebic	3	2.96					.10	.09	16	3.41					1.07	.23								
Bacillary									7	1.49					.19	.04	1	3.92					.02	.06
Mixed infections and other dysenteries									9	1.92					.66	.14								
Yellow fever									5	1.07			1	.21	.50	.11								
Erysipelas																	1	3.92					.04	.17
Dengue									38	8.10					.67	.14								
Mumps	1	.99					.04	.04	19	4.05					.82	.18	7	27.45					.40	1.59

Cerebrospinal meningitis, epidemic									3	.64	1	.21	2	.42	.25	.05								
Purulent infection and septicemia	1	.99					.02	.02																
Tuberculosis, all	3	2.96	1	0.92	1	0.92	.48	.47	24	5.11	11	2.31			2.39	.51	1	3.92	1	3.56			.03	.13
Tuberculosis, pulmonary	2	1.97	1	.92	1	.92	.40	.39	19	4.05	10	2.10			1.43	.30	1	3.92	1	3.56			.03	.13
Tuberculosis of other organs	1	.99					.08	.08	5	1.06	1	.21			.96	.20								
Venereal, all	34	33.50	1	.92			.87	1.74	949	202.17	22	4.63			45.90	9.78	61	239.22					.35	12.59
Syphilis and its results	5	4.93	1	.92			.55	.54	137	29.19	12	2.53			11.70	2.49	5	19.61					.28	1.11
Chancroid and its results	6	5.91					.32	.32	146	31.10					7.39	1.57	1	3.92					.07	.26
Gonorrhea and its results	23	22.66					.90	.89	666	141.88	10	2.10			26.81	5.71	55	215.69					2.86	11.22
Cancer and other malignant growths	1	.99					.04	.04	1	.21			1	.21	.04	.01								
Rheumatism, acute, articular	7	6.90					.31	.31	10	2.13					.42	.09	1	3.92					.01	.04
Rheumatism, subacute and chronic, articular	1	.99					.03	.03	10	2.13					.44	.09	3	11.76					.13	.51
Alcoholism and its results	23	22.66					.55	.54	171	36.43	7	1.47			2.09	.45	19	74.51	6	21.35			.23	.89
Insanity	1	.99	1	.92			.10	.10	11	2.34	9	1.89			.67	.14								
Epilepsy									8	1.70	5	1.05			.32	.07	1	3.92	1	3.56			.02	.06
Tetanus									1	.21					.01	.001	1	3.92			1	3.56	.01	.03
Trachoma									3	.64					.40	.08								
Organic diseases of the heart									5	1.07	4	.84			.55	.12								
Functional diseases of the heart									11	2.34					.40	.09	1	3.92					.01	.05
Bronchitis, acute and chronic	14	13.79					.24	.24	129	27.48					3.97	.85	4	15.68					.09	.37
Broncho-pneumonia	1	.99					.03	.03	1	.21					.06	.01								
Pneumonia (pneumonic fever)	3	2.96			1	.92	.14	.14	5	1.07					.43	.09								
Diarrhea and enteritis	4	3.94					.05	.05	271	57.74					3.67	.78	2	7.84					.01	.05
Intestinal parasites									17	3.62					.35	.08								
Teniada									16	3.41					.32	.07								
Tenia mediocanellata (or saginata)									14	2.98					.30	.07								
Tenia solium									2	.43					.02	.003								
Strongylida									1	.21					.03	.007								
Uncinaria Americana									1	.21					.03	.007								
Inguinal and other herniæ	1	.99					.11	.11	22	4.69	3	.63	1	.21	2.20	.47								
Hepatic abscess									2	.43					.42	.10								
Appendicitis	6	5.91					.23	.23	27	5.75	1	.21	1	.21	2.34	.50	1	3.92					.01	.05
Tropical ulcer									27	5.75					.74	.16								
Pemphigus contagiosus																	1	3.92					.05	.18
Dhobie itch									27	5.75					.95	.20								
Prickly heat									5	1.07					.10	.02								
Other parasitic diseases of the skin							.13	.13	15	3.20					.52	.11	7	27.45					.29	1.15
Acute nephritis	1	.99			1	.92	.01	.01	2	.43					.13	.03								
Chronic nephritis									4	.85	1	.21			.54	.11								
Malingering									14	2.98					1.21	.26								

TABLE No. 72.—*Admissions to sick report, discharges, deaths, and noneffectiveness with ratios per 1,000 of mean strength, for the year 1908—Alaska, Cuba, and Hawaii*—Continued.

Causes of admission to sick report.	Alaska.								Cuba.								Hawaii.							
Mean strength	S. G. O., 1015—A. G. O., 1090.								S. G. O., 4694—A. G. O., 4752.								S. G. O., 255—A. G. O., 281.							
	Admissions.		Discharges.		Deaths.		Noneffective.		Admissions.		Discharges		Deaths.		Noneffective.		Admissions.		Discharges.		Deaths.		Noneffective.	
	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.
External causes, special.																								
Fractures, exclusive of gunshot	8	7.89			1	0.92	0.51	0.51	44	9.37			1	0.21	4.01	0.86	3	11.76					0.10	0.38
Dislocations	3	2.96					.36	.35	17	3.62					.85	.18	1	3.92					.03	.12
Sprains and muscular strains	51	50.25					.66	.65	319	67.96					6.51	1.39	22	86.28					.30	1.19
Wounds, gunshot	2	1.97			2	1.83	.58	.57	12	2.56	2	0.42	6	1.26	1.15	.25								
Wounds other than gunshot	36	35.47	1	0.92			1.19	1.17	247	52.61	1	.21			5.31	1.13	18	70.59					.29	1.15
Frostbite and general freezing	4	3.94			1	.92	.12	.12																
Drowning					3	2.75							1	.21							1	3.56		
Poisoning, acute	1	.99					.01	.01	19	4.06					.19	.04								
Venomous bites, etc	1	.99					.01	.01	9	1.92					.11	.02								
Diseases and injuries grouped.																								
General diseases	92	90.64	2	1.83	1	.92	3.71	3.65	1,602	341.29	48	10.10	9	1.89	74.29	15.83	105	411.76	7	21.35			4.63	18.16
Epidemic diseases	20	19.70					.45	.44	412	87.77	2	.42	8	1.68	22.11	4.71	13	50.98					.81	3.16
Other general diseases	72	70.94	2	1.83	1	.92	3.26	3.21	1,190	253.52	46	9.68	1	.21	52.18	11.12	92	360.78	7	21.35			3.83	15.00
Diseases of the nervous system and organs of special sense	12	11.82	1	.92			.49	.49	203	43.25	19	5.80			8.95	1.90	20	78.43					.91	3.58
Of the nervous system	4	3.94	1	.92			.37	.37	91	19.39	18	3.79			3.86	.82	7	27.45	1	3.56	1	3.56	.17	.68
Of the eye and its adnexa	4	3.94					.07	.07	53	11.29	1	.21			2.27	.48	7	27.45					.40	1.58
Of the ear and its adnexa	4	3.94					.05	.05	59	12.57					2.83	.60	6	23.53					.34	1.33

Diseases of the—																								
Circulatory system	9	8.87					.32	.31	122	25.99	4	.84	1	.21	6.41	1.42	9	35.29					.16	.62
Respiratory system	33	32.51			1	.92	.57	.57	243	51.77	3	.63			7.15	1.52	13	50.98	1	3.56			.33	1.30
Digestive system	66	65.02					1.30	1.28	1,005	214.10	5	1.05	2	.42	20.19	4.30	50	196.08					.65	2.54
Genito-urinary system	7	6.90			1	.92	.13	.13	70	14.91	4	.84			3.21	.68	4	15.69					.10	.40
Skin and cellular tissue	26	25.62					.94	.92	787	167.66	1	.21			19.29	4.11	42	164.71					1.17	4.28
Organs of locomotion	18	17.73					.53	.52	135	28.76	2	.42			4.69	1.00	16	62.75	1	3.56			.28	1.11
Malformations, etc	4	3.94					.26	.26	21	4.47	13	2.74			.99	.21								
Diseases, results of old age	1	.99					.04	.03																
Ill-defined diseases	7	6.90					.20	.20	268	57.09					7.17	1.53	3	11.76					.08	.33
Total for disease	275	270.94	3	2.75	3	2.75	8.48	8.36	4,456	949.30	99	20.83	12	2.53	152.58	32.51	262	1,027.45	10	35.59	1	3.56	8.24	32.32
External causes	151	148.77	1	.92	7	6.42	4.70	4.63	1,185	252.45	3	.63	10	2.10	28.29	6.03	65	254.90	1	3.56	1	3.56	1.35	5.29
Total for disease and external causes	426	419.70	4	3.67	10	9.17	13.18	12.99	5,641	1,201.75	102	21.46	22	4.63	180.87	38.54	327	1,282.35	11	39.15	2	7.12	9.59	37.61
Subclassification (repeated above):																								
Suicide					2	1.83							4	.84										
Homicide													1	.21										

TABLE NO. 73.—*Admissions to sick report, discharges, deaths, and noneffectiveness, with ratios per 1,000 of mean strength, for the year 1908—American troops serving in the Philippine Islands.*

Causes of admission to sick report.	Philippine Islands, total								Philippine Islands, white.								Philippine Islands, colored.							
Mean strength	S. G. O., 11971—A. G. O., 12136.								S. G. O., 9711—A. G. O., 9840.								S. G. O., 2260—A. G. O., 2296							
	Admissions.		Discharges.		Deaths.		Noneffective.		Admissions.		Discharges.		Deaths.		Noneffective.		Admissions.		Discharges.		Deaths.		Noneffective.	
	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.
Typhoid fever	33	2.76			5	0.41	4.71	0.39	33	3.40			5	0.51	4.71	0.49								
Fevers, undetermined	303	25.31					3.95	.33	194	19.98					2.97	.31	109	48.23					0.98	0.43
Malarial fevers	1,484	123.97			2	.16	32.98	2.76	1,303	134.18			1	.10	29.21	3.01	181	80.09			1	0.44	3.77	1.67
Nonmalignant infection	875	73.09					16.52	1.38	745	76.72					14.28	1.47	130	57.52					2.24	.99
Intermittent	834	69.67					15.55	1.30	717	73.83					13.52	1.39	117	51.77					2.03	.90
Remittent or continued	41	3.42					.98	.08	28	2.88					.76	.08	13	5.75					.21	.09
Malignant (estivo-autumnal) infection	576	48.12			2	.16	14.48	1.21	527	54.27			1	.10	12.96	1.33	49	21.68			1	.44	1.52	.67
Intermittent	262	21.88					5.13	.43	256	26.36					4.90	.50	6	2.65					.23	.10
Remittent or continued	312	26.06			1	.08	9.10	.76	270	27.80			1	.10	7.87	.81	42	18.58					1.23	.55
Pernicious	2	.17			1	.08	.24	.02	1	.10					.19	.02	1	.44			1	.44	.05	.02
Infection, undetermined	3	.25					.03	.002	1	.10					.01	.001	2	.88					.02	.01
Malarial cachexia	30	2.51					1.96	.16	30	3.09					1.96	.20								
Smallpox	2	.17					.22	.02									2	.88					.22	.10
Measles	27	2.26					3.39	.28	22	2.27					3.24	.33	5	2.21					.15	.07
Eruptive fevers, others	2	.17					.03	.003	2	.21					.03	.003								
Influenza	21	1.75					.52	.04	21	2.16					.52	.05								
Asiatic cholera	13	1.09			7	.58	.54	.05	8	.82			5	.51	.30	.03	5	2.21			2	.87	.25	.11
Cholera nostras	1	.08					.01	.001	1	.10					.01	.001								
Dysentery	314	26.23	2	0.16	4	.33	30.79	2.57	265	27.29	2	0.20	4	.41	27.64	2.85	49	21.68					3.16	1.40
Amebic	149	12.45	2	.16	2	.16	20.97	1.75	129	13.28	2	.20	2	.20	19.52	2.01	20	8.85					1.45	.64
Bacillary	45	3.76			2	.16	2.68	.22	36	3.71			2	.20	1.79	.18	9	3.98					.90	.40
Mixed infections and other dysenteries	120	10.02					7.14	.60	100	10.30					6.33	.65	20	8.85					.81	.36
Beriberi	1	.08					.36	.03	1	.10					.36	.04								
Erysipelas	12	1.00			1	.08	.64	.05	10	1.03			1	.10	.56	.06	2	.88					.08	.04
Dengue	1,162	97.07					21.54	1.80	694	71.47					14.36	1.48	468	207.08					7.18	3.17

Mumps	56	4.68					3.25	.27	42	4.33					2.63	.27	14	6.19					.62	.27
Yaws (frambesia)	1	.08					.10	.01	1	.10					.10	.01										
Purulent infection and septicemia	2	.17					.30	.02									2	.88					.30	.13		
Tuberculosis (all)	74	6.18	23	1.90	12	.99	7.47	.62	58	5.97	19	1.93	5	.51	5.66	.58	16	7.08	4	1.74	7	3.05	1.80	.80		
Tuberculosis, pulmonary	69	5.76	23	1.90	11	.91	7.02	.58	54	5.56	19	1.93	5	.51	5.38	.55	15	6.64	4	1.74	6	2.61	1.64	.72		
Tuberculosis of other organs	5	.42			1	.08	.45	.04	4	.41					.28	.03	1	.44			1	.44	.17	.07		
Venereal (all)	3,467	289.62	3	.25	3	.25	215.13	17.97	2,590	266.71	3	.30	3	.30	175.85	18.11	877	388.05					39.26	17.38		
Syphilis and its results	492	41.10	3	.25	3	.25	47.42	3.96	407	41.91	3	.30	3	.30	42.08	4.33	85	37.61					5.34	2.36		
Chancroid and its results	639	53.38					32.01	2.67	447	46.03					23.54	2.42	192	84.96					8.47	3.75		
Gonorrhea and its results	2,336	195.14					135.69	11.34	1,736	178.77					110.23	11.35	600	265.49					25.46	11.27		
Cancer and other malignant growths	5	.42	1	.08	3	.25	1.17	.10	4	.41	1	.10	3	.30	1.09	.13	1	.44					.08	.04		
Rheumatism, acute, articular	76	6.35	1	.08			5.34	.45	46	4.74	1	.10			4.21	.43	30	13.27					1.14	.50		
Rheumatism, subacute and chronic, articular	71	5.93					5.67	.47	30	3.09					3.19	.33	41	18.14					2.48	1.10		
Alcoholism and its results	303	25.31			5	.41	4.45	.37	283	29.14			4	.41	4.08	.42	20	8.85			1	.44	.36	.16		
Insanity	13	1.09	4	.33			2.87	.24	10	1.03	3	.30			2.40	.25	3	1.33	1	.44			.47	.21		
Epilepsy	16	1.34	3	.25			1.20	.10	15	1.54	3	.30			1.19	.12	1	.44					.003	.001		
Trachoma	3	.25					.32	.03	3	.31					.32	.03										
Organic diseases of the heart	21	1.75	1	.08	5	.41	2.17	.18	13	1.34	1	.10	2	.20	1.16	.12	8	3.54			3	1.31	1.01	.45		
Aneurism	3	.25			2	.16	.06	.005	2	.21			1	.10	.04	.004	1	.44			1	.44	.02	.01		
Filariasis	2	.17					.80	.07									2	.88					.80	.35		
Other filariasis	2	.17					.80	.07									2	.88					.80	.35		
Functional diseases of the heart	29	2.42	4	.33			1.52	.13	25	2.57	4	.41			1.29	.13	4	1.77					.23	.10		
Bronchitis, acute and chronic	367	30.66					8.30	.69	259	26.67					6.31	.65	108	47.79					1.99	.88		
Pneumonia (pneumonic fever)	10	.84			2	.16	1.08	.09	8	.82					1.05	.11	2	.88			2	.87	.03	.01		
Diarrhea and enteritis	1,020	85.21			1	.08	21.00	1.75	879	90.52					18.69	1.92	141	62.39			1	.44	2.31	1.02		
Intestinal parasites	107	8.94					3.33	.28	100	10.30					3.13	.32	7	3.10					.20	.08		
Teniada	5	.42					.10	.01	4	.41					.06	.01	1	.44					.04	.02		
Tenia mediocanellata (or saginata)	1	.08					.04	.003									1	.44					.04	.02		
Tenia solium	1	.08					.003	.0002	1	.10					.003	.0003										
Tenia nana	2	.17					.03	.003	2	.21					.03	.003										
Bothriocephalus latus	1	.08					.03	.003	1	.10					.03	.003										
Ascarida	24	2.00					.47	.04	20	2.06					.43	.04	4	1.77					.04	.02		
Ascaris lumbricoides	24	2.00					.47	.04	20	2.06					.43	.04	4	1.77					.04	.02		
Strongylida	77	6.43					2.74	.23	75	7.72					2.62	.27	2	.88					.12	.05		
Ankylostoma duodenale	69	5.76					1.95	.16	69	7.11					1.95	.20										
Uncinaria Americana	8	.67					.80	.07	6	.62					.67	.07	2	.88					.12	.05		
Other intestinal parasites	1	.08					.02	.001	1	.10					.02	.002										
Inguinal and other herniæ	36	3.01	1	.08			4.32	.36	26	2.68	1	.10			3.04	.31	10	4.42					1.27	.56		
Hepatic abscess	6	.50					.78	.07	5	.51					.75	.08	1	.44					.03	.01		
Appendicitis	67	5.60			1	.08	7.28	.61	61	6.28					6.62	.68	6	2.65			1	.44	.66	.29		
Climatic bubo	7	.59					.61	.05	6	.62					.55	.06	1	.44					.06	.03		
Tropical ulcer	24	2.00					1.39	.12	19	1.96					1.31	.14	5	2.21					.07	.03		
Pemphigus contagiosus	76	6.35					1.94	.16	75	7.72					1.91	.20	1	.44					.02	.01		

TABLE No. 73.—*Admissions to sick report, discharges, deaths, and noneffectiveness with ratios per 1,000 of mean strength, for the year 1908—American troops serving in the Philippine Islands*—Continued.

Causes of admission to sick report.	Philippine Islands, total.								Philippine Islands, white.								Philippine Islands, colored.							
Mean strength	S. G. O., 11,971—A. G. O., 12,136.								S. G. O., 9,711—A. G. O., 9,840.								S. G. O., 2,260—A. G. O., 2,296.							
	Admissions.		Discharges.		Deaths.		Noneffective.		Admissions.		Discharges.		Deaths.		Noneffective.		Admissions.		Discharges.		Deaths.		Noneffective.	
	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.
Dhobie itch	242	20.22					5.58	0.47	187	19.26					4.31	0.44	55	24.34					1.27	0.56
Prickly heat	11	.92					.11	.01	10	1.03					.11	.01	1	.44					.01	.002
Other parasitic diseases of the skin	54	4.51					1.42	.12	52	5.35					1.38	.14	2	.88					.04	.02
Acute nephritis	2	.17			1	0.08	.42	.04	1	.10			1	0.10	.10	.01	1	.44					.33	.14
Chronic nephritis	4	.33			1	.08	1.03	.09	2	.21			1	.10	.74	.08	2	.88					.29	.13
Malingering	3	.25					.19	.02	3	.31					.19	.02								
External causes, special.																								
Fractures, exclusive of gunshot	136	11.36	9	0.74	4	.33	16.43	1.37	117	12.05	8	0.81	4	.41	13.84	1.43	19	8.41	1	0.44			2.59	1.15
Dislocations	50	4.18	2	.16	1	.08	2.46	.21	35	3.60	2	.20	1	.10	1.60	.16	15	6.64					.87	.38
Sprains and muscular strains	667	55.72	1	.08			14.12	1.18	499	51.39	1	.10			10.90	1.12	168	74.34					3.22	1.43
Wounds, gunshot	38	3.17	6	.49	16	1.32	3.18	.27	26	2.68	1	.10	11	1.12	2.14	.22	12	5.31	5	2.18	5	2.18	1.05	.46
Wounds other than gunshot	627	52.38	2	.16	4	.33	15.16	1.27	483	49.74	2	.20	3	.30	11.77	1.21	141	63.72			1	.44	3.39	1.50
Sunstroke	4	.33					.05	.004	1	.11					.05	.01								
Drowning					13	1.07							9	.91							4	1.74		
Poisoning, acute	88	7.35			11	.91	1.14	.10	77	7.93			11	1.12	1.04	.10	11	4.87					.10	.04
Venomous bites, etc	24	2.00					.32	.03	17	1.75					.26	.03	7	3.10					.06	.03
Diseases and injuries grouped.																								
General diseases	7,192	600.79	35	2.88	44	3.63	342.24	28.59	5,458	562.04	31	3.15	32	3.25	289.78	28.91	1,731	767.26	4	1.71	12	5.23	61.16	27.20
Epidemic diseases	3,153	263.39	2	.16	19	1.57	99.35	8.30	2,115	248.69	2	.20	16	1.63	83.81	8.63	738	326.55			3	1.31	15.54	6.88
Other general diseases	4,039	337.40	33	2.72	25	2.06	242.89	20.29	3,043	313.36	29	2.95	16	1.63	196.97	20.28	996	440.71	4	1.74	9	3.92	45.92	20.32

Diseases of the nervous system and organs of special sense	567	47.36	22	1.81	1	.08	30.44	2.54	433	44.59	15	1.52	....	....	24.44	2.52	134	59.29	7	3.05	1	.44	6.00	2.66
Of the nervous system	231	19.30	13	1.07	1	.08	15.29	1.28	159	16.37	12	1.22	....	....	12.38	1.28	72	31.86	1	.44	1	.44	2.90	1.29
Of the eye and its adnexa	186	15.54	8	.66	....	....	8.23	.69	145	14.93	2	.20	....	....	5.71	.59	41	18.14	6	2.61	....	....	2.52	1.11
Of the ear and its adnexa	150	12.53	1	.08	....	....	6.92	.58	129	13.28	1	.10	....	....	6.34	.65	21	9.29	....	....	....	....	.58	.26
Diseases of the—																								
Circulatory system	450	37.59	5	.41	7	.58	23.02	1.92	363	37.38	5	.51	3	.30	18.25	1.88	87	38.50	....	....	4	1.74	4.77	2.11
Respiratory system	627	52.38	3	.25	2	.16	17.08	1.43	436	44.90	3	.30	....	....	13.39	1.38	191	84.51	....	....	2	.87	3.69	1.63
Digestive system	2,871	239.83	2	.16	4	.33	70.96	5.93	2,340	240.96	2	.20	2	.20	60.56	6.24	531	234.95	....	....	2	.87	10.41	4.61
Genito-urinary system	219	18.29	2	.16	2	.16	10.16	.85	173	17.81	....	....	2	.20	7.56	.78	46	20.35	2	.87	....	....	2.60	1.15
Skin and cellular tissue	1,720	143.68	1	.08	....	....	43.13	3.60	1,352	139.22	....	....	....	....	34.49	3.55	368	162.83	1	.44	....	....	8.65	3.83
Organs of locomotion	389	32.50	4	.33	....	....	13.70	1.14	265	27.29	3	.30	....	....	10.70	1.10	124	54.87	1	.44	....	....	3.01	1.33
Malformations, etc	19	1.59	9	.74	....	....	1.36	.11	18	1.85	8	.81	....	....	1.33	.14	1	.44	1	.44	....	....	.03	.01
Ill-defined diseases	405	33.83	....	....	1	.08	8.10	.68	262	26.98	....	....	....	....	6.27	.65	143	63.28	....	....	1	.44	1.83	.81
Total for disease	14,459	1,207.84	83	6.84	61	5.03	560.19	46.80	11,100	1,143.03	67	6.81	39	3.96	457.75	47.14	3,359	1,486.28	16	6.97	22	9.58	102.44	45.33
External causes	2,775	231.81	22	1.81	52	4.28	78.43	6.55	2,099	216.15	15	1.52	42	4.27	60.47	6.23	676	299.12	7	3.05	10	4.35	17.97	7.95
Total for disease and external causes	17,234	1,439.65	105	8.65	113	9.31	638.63	53.35	13,199	1,359.18	82	8.33	81	8.23	518.22	53.36	4,035	1,785.40	23	10.02	32	13.94	120.41	53.28
Subclassification (repeated above):																								
Suicide	....	....	....	....	8	.66	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Homicide	....	....	....	....	10	.82	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....

TABLE NO. 74.—*Admissions to sick report, discharges, deaths, and noneffectiveness, with ratios per 1,000 of mean strength, for the year 1908—American troops on transports, Porto Rican troops, and Filipino troops.*

Causes of admission to sick report.	Transports.								Porto Rican troops.								Philippine Scouts.							
Mean strength	S. G. O., 1,155—A. G. O., 1,203.								564.								S. G. O., 5,085—A. G. O., 5,203.							
	Admissions.		Discharges.		Deaths.		Noneffective.		Admissions.		Discharges.		Deaths.		Noneffective.		Admissions.		Discharges.		Deaths.		Noneffective.	
	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.
Typhoid fever	5	4.33					0.21	0.18	3	5.32			1	1.77	0.46	0.81	9	1.77					0.78	0.15
Fevers, undetermined	1	.87					.01	.01	17	30.14					17	.30	104	20.45					1.31	.26
Malarial fevers	122	105.63					1.33	1.15	124	219.86			1	1.77	2.50	4.43	1,205	236.97			1	0.19	19.31	3.80
Nonmalignant infection	119	103.03					1.29	1.12	116	205.67					2.27	4.02	1,162	228.52					17.61	3.46
Intermittent	118	102.16					1.28	1.11	115	203.90					2.25	3.98	992	195.08					15.09	2.97
Remittent or continued	1	.87					.01	.01	1	1.77					.02	.04	170	33.43					2.52	.49
Malignant (estivo-autumnal) infection	1	.87					.01	.005	8	14.18			1	1.77	.23	.41	40	7.87			1	.19	1.56	.31
Intermittent																	5	.98					.11	.02
Remittent or continued	1	.87					.01	.005	7	12.41					.15	.27	34	6.69			1	.19	1.39	.27
Pernicious									1	1.77			1	1.77	.08	.14	1	.20					.05	.01
Infection undetermined	2	1.73					.04	.03																
Malarial cachexia																	3	.59					.14	.03
Smallpox	1	.87					.02	.02	4	7.09					.19	.34	2	.39			1	.19	.09	.02
Measles	66	57.14					1.49	1.29	11	19.50					.42	.74								
Eruptive fevers, others	1	.87					.01	.01	1	1.77					.05	.10	8	1.58					.35	.07
Influenza	9	7.79					.05	.05	47	83.33					.70	1.24	19	3.74					.28	.06
Asiatic cholera	1	.87			1	0.83	.003	.002									4	.79			4	.77	.04	.01
Cholera nostras																	1	.20			1	.19	.01	.002
Dysentery	17	14.72			1	.83	2.99	2.59	9	15.96					.43	.76	58	11.41	2	0.38			3.38	.66
Amebic	10	8.66					2.49	2.16									25	4.92	2	.38			2.01	.40
Bacillary	1	.87			1	.83	.08	.07									5	.98					.35	.07
Mixed infections and other dysenteries	6	5.19					.41	.36	9	15.96					.43	.76	28	5.51					1.02	.20
Leprosy																	1	.20	1	.19			.31	.06
Beriberi																	618	121.53	13	2.50	7	1.35	61.55	12.10
Erysipelas	1	.87					.08	.07	1	1.77					.02	.03	1	.20					.02	.004

Dengue	1	.87				.02	.01	25	44.33				.57	1.01	56	11.01					1.24	.24
Mumps	57	49.35				1.06	.92								7	1.38					.17	.03
Cerebrospinal meningitis, epidemic	1	.87			1 .83	.02	.01																	
Yaws (frambesia)															4	.79					.80	.16
Purulent infection and septicemia	1	.87				.13	.12	1	1.77			11.77	.01	.01										
Tuberculosis, all	4	3.46			43.33	5.78	5.01	1	1.77				.01	.02	33	6.49	20	3.84	2	.38	4.80	.94
Tuberculosis, pulmonary	3	2.60			43.33	5.65	4.89	1	1.77				.01	.02	31	6.10	20	3.84	1	.19	4.50	.88
Tuberculosis of other organs	1	.87				.13	.12								2	.40			1	.19	.30	.06
Venereal, all	88	76.19				3.92	3.40	137	242.91				6.70	11.88	285	56.05			1	.19	16.93	3.33
Syphilis and its results	15	12.99				1.12	.97	22	39.01				1.28	2.27	29	5.70			1	.19	2.78	.55
Chancroid and its results	7	6.06				.35	.30	34	60.28				2.06	3.65	24	4.72					1.48	.29
Gonorrhea and its results	66	57.14				2.45	2.12	81	143.62				3.36	5.96	232	45.63					12.67	2.49
Cancer and other malignant growths					1 .83	.18	.16								2	.39			2	.38	.09	.02
Rheumatism, acute, articular	8	6.93				.39	.34	3	5.32				.28	.49	16	3.15					.40	.08
Rheumatism, subacute and chronic, articular	1	.87				.33	.29								11	2.16					.41	.08
Alcoholism and its results	4	3.46				.15	.13								5	.98					.02	.004
Insanity						1.42	1.23	1	1.77	1	1.77		.07	.12	5	.98	4	.77			1.07	.21
Epilepsy	1	.87				.49	.43								1	.20					.02	.004
Trachoma															1	.20	1	.19			.05	.01
Organic diseases of the heart	1	.87				.61	.53	1	1.77	1	1.77		.11	.19	10	1.97	2	.38	2	.38	.31	.06
Filariasis								2	3.55				.13	.23	10	1.97					1.27	.25
Lymphatic varix								1	1.77				.12	.21								
Lymphangitis and elephantoid fever								1	1.77				.01	.02								
Other filariasis						.17	.15								10	1.97					1.27	.25
Functional diseases of the heart	1	.87				.48	.41								4	.79					.10	.02
Bronchitis, acute and chronic	50	43.29				.83	.72	11	19.50				.18	.31	214	42.08					3.90	.77
Broncho-pneumonia	1	.87				.07	.06								1	.20					.08	.02
Pneumonia (pneumonic fever)	1	.87				.05	.04								14	2.75			2	.38	1.12	.22
Diarrhea and enteritis	34	29.44				.56	.48	39	69.15				.67	1.18	201	39.53			1	.19	2.40	.47
Intestinal parasites								10	17.73				.34	.61	48	9.44					1.12	.22
I. Teniada															1	.20					.01	.003
Tenia solium								2	3.55				.03	.06	1	.20					.01	.003
Ascarida															21	4.13					.39	.08
Ascaris lumbricoides															21	4.13					.39	.08
Strongylida															24	4.72					.06	.13
Ankylostoma duodenale															19	3.74					.56	.11
Uncinaria Americana								8	14.18				.31	.55	5	.98					.10	.02
Trichotrachelida															1	.20					.04	.01
Trichocephalus dispar															1	.20					.04	.01
Other intestinal parasites															1	.20					.02	.004
Inguinal and other herniæ	1	.87				.24	.21	2	3.55				.22	.39	5	.98					.78	.15

TABLE No. 74.—*Admissions to sick report, discharges, deaths, and noneffectiveness with ratios per 1,000 of mean strength, for the year 1908—American troops on transports, Porto Rican troops, and Filipino troops*—Continued.

Causes of admission to sick report.	Transports.								Porto Rican troops.								Philippine scouts.							
Mean strength	S. G. O., 1,155—A. G. O., 1,203.								564.								S. G. O., 5,085—A. G. O., 5,203.							
	Admissions.		Discharges.		Deaths.		Noneffective.		Admissions.		Discharges.		Deaths.		Noneffective.		Admissions.		Discharges.		Deaths.		Noneffective.	
	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.
Hepatic abscess							0.12	0.10									2	0.39			2	0.38	.17	0.03
Appendicitis	4	3.46					.25	.21									1	.20					.03	.01
Climatic bubo																	2	.39					.12	.02
Tropical ulcer																	6	1.18					.21	.04
Jiggers (pulex penetrans)									2	3.55					0.01	0.02								
Pemphigus contagiosus																	2	.39					.11	.02
Dhobie itch	1	.87					.02	.02	1	1.77					.02	.03	110	21.63					2.15	.42
Tenia imbricata																	3	.59					.12	.02
Prickly heat																	1	.20					.01	.002
Other parasitic diseases of the skin	3	2.60					.05	.04	4	7.09					.05	.09	16	3.15					.36	.07
Chronic nephritis					1	0.83	.22	.19									1	.20					.53	.10
Malingering							.01	.01									5	.98					.20	.04
External causes, special.																								
Fractures, exclusive of gunshot	4	3.46			1	.83	.86	.75	1	1.77					.01	.07	28	5.51	1	0.19			2.08	.41
Dislocations	2	1.73					.25	.21	1	1.77					.12	.22	2	.39					.05	.01
Sprains and muscular strains	9	7.79					.26	.22	4	7.09					.04	.07	137	26.94					2.28	.45
Wounds, gunshot							.41	.35	2	3.55			1	1.77	.04	.07	5	.98			8	1.54	.12	.02
Wounds other than gunshot	15	12.98					.29	.25	12	21.28					.42	.15	214	42.08					5.18	1.02
Sunstroke																	3	.59					.13	.02
Drowning																					4	.77		
Poisoning, acute									1	1.77					.02	.04	2	.39					.02	.003
Venomous bites, etc	2	1.73					.04	.03	1	1.77					.01	.02	27	5.31					.38	.07
Snake bite																	1	.20					.02	.004
Other venomous bites, etc.	2	1.73					.04	.03	1	1.77					.01	.02	26	5.11					.36	.07

Diseases and injuries grouped.																								
General diseases	395	341.99			8	6.66	19.02	16.47	371	657.80			35.32	12.40	21.99	2,362	464.50	36	6.92	19	3.65	111.42	21.91
Epidemic diseases	287	248.48			3	2.49	7.37	6.38	228	404.26			23.55	5.40	9.57	2,004	394.10	16	3.08	14	2.69	88.45	17.39
Other general diseases	108	93.51			5	4.16	11.65	10.09	143	253.55			11.77	7.00	12.42	358	70.40	20	3.84	5	.96	22.97	4.52
Diseases of the nervous system and organs of special sense	80	69.26					6.26	5.42	17	30.14				.70	1.24	176	34.61	9	1.73			5.80	1.14
Of the nervous system	61	52.81					5.14	4.45	4	7.09	2	3.55		.37	.66	61	12.00	6	1.15			2.55	.50
Of the eye and its adnexa	9	7.79					.59	.51	10	17.73				.29	.52	98	19.27	3	.58			2.45	.48
Of the ear and its adnexa	10	8.66					.53	.46	3	5.32				.04	.06	17	3.34					.80	.16
Diseases of the circulatory system	9	7.79					1.60	1.38	11	19.50	1	1.77		.50	.89	75	14.75	2	.38	3	.58	3.44	.68
Diseases of the respiratory system	111	96.10					2.32	2.01	15	26.60				.30	.53	309	60.77	3	.58	2	.38	6.78	1.33
Diseases of the digestive system	142	122.94					3.87	3.35	106	187.94				2.27	4.03	765	150.44			5	.96	11.03	2.17
Diseases of the genito-urinary system	6	5.19			1	.83	.54	.47	22	39.01				.89	1.57	31	6.10	1	.19			2.19	.43
Diseases of the skin and cellular tissue	66	57.14					1.74	1.50	92	163.12				2.17	3.85	621	122.12					16.36	3.22
Diseases of the organs of locomotion	9	7.79					.73	.63	1	1.77				.07	.12	119	23.40	1	.19			2.45	.48
Malformations, etc							.71	.62	2	3.55	1	1.77		.04	.06	5	.98	1	.19			.40	.08
Diseases, results of old age																1	.20					.01	.003
Ill-defined diseases	9	7.79					.56	.48	21	37.23				.28	.50	152	29.89					2.55	.50
Total for disease	827	716.02			9	7.48	37.34	32.33	658	1,166.67	4	7.09	35.32	19.61	34.78	4,616	907.77	53	10.19	29	5.57	162.43	31.94
External causes	51	44.16			1	.83	3.95	3.42	43	76.24			11.77	1.26	2.24	762	149.85	1	.19	14	2.69	16.08	3.16
Total for disease and external causes	878	760.17			10	8.31	41.29	35.75	701	1,242.91	4	7.09	47.09	20.88	37.02	5,378	1,057.62	54	10.38	43	8.26	178.52	35.11
Subclassification [1] (repeated above):																								
Suicide																				3	.58			
Homicide													11.77							4	.77			
Killed in action																				1	.19			
Wounded in action																2	.39							

TABLE NO. 75.—*Total movement of sick for the United States Army at home compared with that of foreign armies.*

	United States (continental), year 1908 (American troops, enlisted men).						British, year 1907.[a]		French, year 1906.	
	White and colored.		White.		Colored.					
	Total.	Hospital.	Total.	Hospital.	Total.	Hospital.	Total.	Hospital.	Total.	Hospital.
Mean strength	46,316	.....	45,592	.....	724	.....	217,844	.....	[b] 509,756	.....
Admitted to sick report	53,198	38,792	52,457	38,231	741	561	.....	120,443	312,892	122,582
Ratio per 1,000 of mean strength	1,148.59	837.55	1,150.57	838.55	1,023.48	774.86	.....	552.9	681.0	240.0
Disposed of, all causes	[c] 52,952	.....	[c] 52,224	.....	[c] 728	.....	.....	.....	.....	.....
Ratio per 1,000 of mean strength	1,143.28	.....	1,145.46	.....	1,005.52	.....	.....	.....	.....	.....
Died, all causes	[d] 257	.....	[d] 251	.....	[d] 6	.....	1,164	.....	1,797	.....
Ratio per 1,000 of mean strength	5.35	.....	5.30	.....	8.29	.....	5.09	.....	[e] 3.52	.....
Ratio per 1,000 of all disposed of	4.85	.....	4.81	.....	8.24	.....	.....	.....	.....	.....
Died of disease	149	.....	145	.....	4	.....	.....	.....	1,561	.....
Ratio per 1,000 of mean strength	3.10	.....	3.06	.....	5.52	.....	.....	.....	3.06	.....
Died of injury	108	.....	106	.....	2	.....	.....	.....	236	.....
Ratio per 1,000 of mean strength	2.25	.....	2.24	.....	2.76	.....	.....	.....	.46	.....
Died when on sick report or present with command	[f] 171	.....	[f] 166	.....	[f] 5	.....	.....	.....	1,536	.....
Ratio per 1,000 of mean strength	3.56	.....	3.51	.....	6.91	.....	.....	.....	3.01	.....
Ratio per 1,000 of all disposed of	3.23	.....	3.18	.....	6.87	.....	.....	.....	.....	.....
Died when not on sick report or absent from command	86	.....	85	.....	1	.....	.....	.....	261	.....
Accidental deaths	83	.....	81	.....	2	.....	.....	.....	150	.....
Suicides	25	.....	25	.....	.....	.....	.....	.....	86	.....
Returned to duty	50,506	.....	49,824	.....	682	.....	.....	.....	.....	.....
Ratio per 1,000 of all disposed of	953.81	.....	954.04	.....	936.81	.....	.....	.....	.....	.....
Otherwise disposed of	1,163	.....	1,128	.....	25	.....	.....	.....	.....	.....
Ratio per 1,000 of all disposed of	21.96	.....	21.79	.....	34.34	.....	.....	.....	.....	.....
Total days lost on account of sickness	698,304	605,221	683,060	591,288	15,244	13,933	.....	.....	4,797,477	.....
Constantly noneffective on account of sickness	1,907.93	1,653.61	1,866.28	.....	41.65	.....	.....	7,097.15	13,143.77	.....
Ratio per 1,000 of mean strength	41.19	35.70	40.93	35.43	57.53	52.58	.....	33.09	25.78	.....
Average days of treatment:										
For each soldier of mean strength	15.08	13.07	14.98	12.97	21.06	19.24	.....	12.08	9.41	.....
For each case of sickness	13.13	15.60	13.02	15.47	20.57	24.84	.....	21.87	15.33	.....
Discharges for disability, all causes	1,026	.....	1,011	.....	15	.....	2,635	.....	18,510	.....
Ratio per 1,000 of mean strength	21.35	.....	21.36	.....	20.72	.....	11.70	.....	36.32	.....
Total losses per 1,000 of mean strength	26.70	.....	26.66	.....	29.01	.....	16.79	.....	39.84	.....

	Prussian, year 1906.		Bavarian, year 1906.		Austro-Hungarian, year 1907.		Dutch, year 1904.		Spanish, year 1906.		Belgian, year 1907.	
	Total.	Hospital.	Total.	Hospital.	Total.	Hospital.	Total.	Hospital.	Total.	Hospital.	Total.	Hospital.
Mean strength	533,783	.....	65,522	.....	285,455	.....	28,396	.....	78,538	.....	36,113	.....
Admitted to sick report	314,293	131,647	36,050	14,337	235,936	109,578	38,027	20,158	81,443	30,964	.....	15,045
Ratio per 1,000 of mean strength	588.8	246.6	550.2	218.8	826.5	383.9	1,358.0	710.0	1,037.0	394.2	.....	416.61
Disposed of, all causes	313,936	.....	36,155	.....	235,866	.....	38,358	.....	81,162	.....	.....	15,112
Ratio per 1,000 of mean strength	588.1	.....	551.8	.....	826.3	.....	1,350.9	.....	1,033.4	.....	.....	418.46
Died, all causes	1,011	.....	126	.....	925	.....	58	.....	394	.....	.....	75
Ratio per 1,000 of mean strength	[c]1.89	.....	[c]1.92	.....	[c]3.24	.....	[c]2.04	.....	[c]5.02	.....	.....	[c]2.08
Ratio per 1,000 of all disposed of	3.2	.....	3.5	.....	3.9	.....	1.5	.....	4.85	.....	.....	4.96
Died of disease	663	.....	88	.....	639	.....	53	.....	362	.....	.....	57
Ratio per 1,000 of mean strength	1.24	.....	1.34	.....	2.24	.....	1.87	.....	4.61	.....	.....	1.58
Died of injury	348	.....	38	.....	286	.....	5	.....	32	.....	.....	18
Ratio per 1,000 of mean strength	.65	.....	.58	.....	1.00	.....	.18	.....	.41	.....	.....	.50
Died when on sick report or present with command	703	.....	93	.....	.....	.....	.....	.....	.....	.....	.....	.....
Ratio per 1,000 of mean strength	1.32	.....	1.42	.....	.....	.....	.....	.....	.....	.....	.....	.....
Ratio per 1,000 of all disposed of	2.24	.....	2.57	.....	.....	.....	.....	.....	.....	.....	.....	.....
Died when not on sick report or absent from command	308	.....	33	.....	.....	.....	.....	.....	.....	.....	.....	.....
Accidental deaths	152	.....	21	.....	87	.....	4	.....	16	.....	.....	11
Suicides	196	.....	17	.....	199	.....	1	.....	16	.....	.....	7
Returned to duty	295,432	.....	33,733	.....	201,792	.....	36,028	.....	75,475	.....	.....	13,225
Ratio per 1,000 of all disposed of	941.1	.....	933.0	.....	855.5	.....	939.3	.....	929.93	.....	.....	875.13
Otherwise disposed of	17,493	.....	2,296	.....	33,149	.....	2,272	.....	5,293	.....	.....	1,812
Ratio per 1,000 of all disposed of	55.7	.....	63.5	.....	140.5	.....	59.2	.....	65.22	.....	.....	119.90
Total days lost on account of sickness	4,778,704	.....	566,545	.....	3,776,206	.....	.....	98,561	.....	860,665	.....	305,749
Constantly noneffective on account of sickness	13,032	.....	15,522	.....	10,346	.....	.....	269	.....	2,358	.....	838
Ratio per 1,000 of mean strength	24.53	.....	23.69	.....	36.24	.....	.....	9.47	.....	30.02	.....	23.20
Average days of treatment:												
For each soldier of mean strength	9.0	.....	8.6	.....	13.2	.....	.....	3.3	.....	10.9	.....	8.47
For each case of sickness	14.7	.....	15.2	.....	15.5	.....	.....	4.8	.....	26.4	.....	20.32
Discharges for disability, all causes	23,996	.....	3,185	.....	.....	.....	.....	.....	2,682	.....	.....	632
Ratio per 1,000 of mean strength	45.0	.....	48.6	.....	.....	.....	.....	.....	34.1	.....	.....	17.50
Total losses per 1,000 of mean strength	46.9	.....	50.52	.....	.....	.....	.....	.....	39.1	.....	.....	19.58

[a] British ratios for the United Kingdom are: Admitted, 438; died, 3.14; discharged as invalids, 14.22; constantly noneffective, 24.64; average sick time to each soldier, 8.99 days, and to each case, 20.54 days.

[b] Total effective, including officers.

[c] Includes dispositions of cases remaining from previous year.

[d] Death ratios are calculated on the average strength present and absent—total, 48,053; white, 47,329; colored, 724.

[e] The number of deaths is given as reported on International Table No. IX, as the ratios made therefrom afford better comparison with the same figures for American troops.

[f] Including deaths in general hospitals.

TABLE No. 76.—*A comparison of the admission and death rates of the United States Army at home for certain special diseases with those of foreign armies.*

	Admission rates per 1,000 of mean strength.												Death rates per 1,000 of mean strength.											
	United States, continental (enlisted men), year 1908.			British, year 1907, home and abroad.	French, year 1906.	Prussian, year 1906.	Bavarian, year 1906.	Austro-Hungarian, year 1907.	Dutch, year 1904.	Russian, year 1905.	Spanish, year 1906.	Belgian, year 1907.	United States, continental (enlisted men), year 1908.			British, year 1907, home and abroad.	French, year 1906.	Prussian, year 1906.	Bavarian, year 1906.	Austro-Hungarian, year 1907.	Dutch, year 1904.	Russian, year 1905.	Spanish, year 1906.	Belgian, year 1907.
	White.	Colored.	Total.										White.	Colored.	Total.									
1. Alkoholismus acutus, including delirium tremens	28.54	17.96	28.37	1.3	0.43	0.08	0.23	(a)	0.17	0.2	0.05	0.11	0.11	....	0.10	0.05	.....	0.01	.....	(a)	.....	.....	.....	.....
2. Appendicitis, typhlitis, perityphlitis	4.06	4.14	4.06	(a)	(a)	3.2	3.3	(a)	(a)	(a)	.31	(a)	.11	....	.10	(a)	(a)	.10	0.08	(a)	(a)	(a)	0.05	(a)
3. Bronchitis acuta	32.99	26.24	32.88	b 19.2	83.3	44.9	55.7	c 94.2	75.2	18.2	34.96	33.73	.....	.....	.....	a .05	0.25	.01	.....	c 0.03	0.03	.....	.20	.....
4. Cholera Asiatica	.....	.....	.....	.....	.....	.....	.....	.....	.....	.01	.....	.....	.....	.....	.....	.01	.....	.....	.....	.....	.....	.....	.....	.....
5. Cholera nostras	.02	.....	.02	.....	.....	.....	.....	.....	.....	.01	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
6. Diphtheria et croup	1.21	.....	1.19	.3	1.29	.65	.21	.1	.03	.1	.02	.53	.08	....	.08	.01	.02	.02	.....	.01	.....	0.01	.....	.....
7. Dysenteria	2.32	9.67	2.44	4.7	2.38	.30	.06	.4	.....	.7	.05	.06	.02	....	.02	.14	.03	.01	.02	.01	.....	.03	.....	0.03
8. Erysipelas	1.38	1.38	1.38	.3	2.12	.87	.96	1.9	1.7	2.7	4.76	.91	.....	.....	.....	.....	.....	.02	.....	.01	.....	.06	.04	.06
9. Febris intermittens (malaria)	24.48	11.05	24.27	57.8	1.12	.11	.05	2.2	6.3	28.8	26.95	.14	.....	.....	.....	.06	.....	.....	.....	.....	.....	.06	.05	.....
10. Febris recurrens	.....	.....	.....	2.2	.....	.....	.....	(a)	.....	.05	.26	.....	.....	.....	.....	.04	.....	.....	.....	(a)	.....	.....	.....	.....
11. Fractura ossium	11.73	5.53	11.64	(a)	(a)	5.9	3.8	2.6	(a)	(a)	1.54	(a)	.25	1.38	.27	(a)	(a)	.02	.....	.01	(a)	(a)	.01	(a)
12. Gonorrhea	123.05	151.93	123.50	43.6	19.0	12.4	11.9	28.1	16.6	31.8	27.27	19.99	.....	.....	.....	.....	.....	s .01	.....	.....	.....	.....	.....	.....
13. Hernia	5.18	2.76	5.14	3.0	6.9	2.0	1.4	6.1	3.5	3.2	3.31	5.34	.02	.....	.02	.....	.....	.....	.....	.....	.....	.....	.....	.....
14. Influenza	41.30	20.72	40.98	15.0	19.2	6.2	8.9	3.2	17.9	19.0	26.82	17.92	.02	.....	.02	.01	.23	.01	.....	.....	.....	.06	.11	.....
15. Insolatio (Hitzschlag, coup de chaleur)	.11	.....	.11	1.3	.49	.20	.55	.2	.03	.03	.....	.25	.....	.....	.....	.13	.....	.01	.....	.....	.....	.....	.....	.....
16. Luxationes articulorum	3.36	.....	3.30	(a)	(a)	1.2	1.1	.6	(a)	(a)	.59	(a)	.....	.....	.....	(a)	(a)	.....	.....	.....	(a)	(a)	.....	(a)
17. Meningitis cerebro-spinalis epidemica	.29	.....	.28	.1	.21	.09	.32	(a)	.....	.02	.08	.14	.15	....	.15	.09	.11	.05	.11	(a)	.....	.01	.08	.08
18. Morbilli	20.18	.....	19.86	1.4	15.4	.56	.41	.7	.35	.3	5.83	.14	.17	....	.17	.....	.09	.....	.....	.01	.....	.01	.07	.....
19. Parotitis epidemica	14.43	1.38	14.23	.3	18.0	.80	2.0	1.4	.03	3.3	5.52	1.22	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
20. Pleuritis	3.44	5.53	3.48	(a)	8.34	3.7	3.7	5.7	(a)	8.9	2.82	3.02	.02	....	.02	(a)	.05	.06	.05	.09	(a)	.2	.10	.....
21. Pneumonia crouposa sive lobaris	2.54	4.14	2.57	c 3.2	3.21	4.6	6.7	4.9	5.2	4.4	2.36	2.52	.44	....	.44	c .40	.25	.23	.20	.21	.35	.35	.11	.....
22. Rheumatismus articulorum	15.68	17.96	15.72	11.8	18.2	6.3	7.4	12.4	10.9	5.0	18.81	14.95	.02	....	.02	.01	.....	.01	.02	.01	.....	.01	.02	.03
23. Scarlatina	.72	.....	.71	1.2	3.0	.69	.35	.3	1.7	.1	.22	.47	.....	.....	.....	.02	.05	.02	.....	.02	.....	.01	.02	.....
24. Scorbutus	.....	.....	.....	.....	.....	.01	.....	.3	.....	.8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.01	.....	.....
25. Syphilis	22.46	66.30	23.15	39.3	7.3	4.7	3.6	16.0	4.1	15.6	8.79	6.12	.04	....	.04	.04	.....	.....	.....	.01	.....	.....	.....	.....
26. Trachoma	.90	.....	.89	.2	.06	.35	.....	4.5	.....	6.1	.....	.28	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

27. Tuberculosis pulmonum	**3.31**	**5.53**	**3.35**	**1.9**	**4.3**	**1.4**	**1.4**	**1.4**	**4.4**	**2.8**	**6.78**	**3.52**	**.34**	.33	.31	.31	.10	.26	.42	.35	.59	.64	.44
28. Tuberculosis ceterorum organorum	.70	2.76	.73	.3	2.0	.39	.18	2.5	1.09	1.4	.42	.49	.06	.06	.04	.28	.10	.05	.19	.14	.09	.04	.08
29. Typhus abdominalis	2.96	1.38	2.94	5.8	4.53	.51	.11	2.1	.91	5.1	4.72	.86	.23	.23	1.01	.57	.07		.27	.07	.85	.89	.17
30. Typhus exanthematicus										.4											.05		
31. Ulcus molle	27.64	63.54	28.20	(a)	[d]2.3	2.2	1.2	10.1	(a)	[d]11.8	27.34	(d)			(a)					(a)		.01	
32. Variola	.24	1.38	.26	.2	.01					.2	.84	.06			.01						.03	.04	
33. Morbi auris	8.31	1.38	8.20	9.3	7.6	10.8	13.3	18.2	21.1	17.4	4.48	12.59	.04	.04	.02	.01		.03	.01	.03	.20		.03
34. Morbi cordis	2.59	2.76	2.59	8.5	2.89	3.3	2.8	6.3	2.11	3.5	4.97	4.15	.23	.23	.38	.06	.02	.06	.05	.07	.06	.12	.03
35. Morbi cutis	23.49	15.19	23.36	33.0	19.5	14.7	9.0	180.8	183.4	30.6	45.08	22.65	.02	.02					.04		.04	.02	
36. Morbi mentis	1.58	1.38	1.58	1.0	.42	1.2	1.3	1.1	1.1	.6	.58	1.05			.01		.01				.01		
37. Morbi oculi	15.35	17.96	15.39	8.5	6.0	13.8	12.1	32.0	32.8	16.5	13.11	13.87											
38. Morbi systemat. urin. et sexual (excluding venerie et syphilis)	15.70	11.05	15.63	11.1	9.2	5.9	5.5	13.9	9.2	7.4	6.57	8.75	.17	1.38	.19	.15	.05	.04	.08	.06	.14	.01	.06	.03

[a] Diseases not reported in table.

[b] Includes chronic bronchitis.

[c] Includes broncho pneumonia.

[d] Includes venereal adenitis.

TABLE No. 77.—*Showing the most important diseases, by departments, in the United States.*

Diseases.	Absolute numbers—Admissions by departments.													Proportionate numbers—Admissions per 1,000 of mean strength.												
	Lakes.	East.	Gulf.	Dakota.	Missouri.	Texas.	Colorado.	Columbia.	California.	Instruction camps.	General hospitals.	Total.	White.	Colored.	Lakes.	East.	Gulf.	Dakota.	Missouri.	Texas.	Colorado.	Columbia.	California.	Instruction camps.	General hospitals.	Total.	White.	Colored.
1. Alkoholismus acutus, including delirium tremens	75	573	111	42	126	46	45	106	129	21	40	1,314	1,301	13	22.18	42.83	31.51	23.76	15.29	17.20	20.30	32.48	26.72	8.69	64.10	28.37	28.54	17.96
2. Appendicitis typhlitis, perityphlitis	12	58	10	11	20	15	7	17	27	4	7	188	185	3	3.55	4.34	2.84	6.22	2.43	5.61	3.16	5.21	5.59	1.66	11.22	4.06	4.06	4.14
3. Bronchitis acuta	93	597	127	59	289	58	49	90	112	38	11	1,523	1,504	19	27.51	44.62	36.05	33.37	35.06	21.68	22.10	27.57	23.20	15.73	17.63	32.88	32.99	26.24
4. Cholera Asiatica																												
5. Cholera nostras									1			1	1										.21			.02	.02	
6. Diphtheria et croup	2	19	5	5	11	2	5	4	1	1		55	55		.59	1.42	1.42	2.83	1.33	.75	2.26	1.23	.21	.41		1.19	1.21	
7. Dysenteria	16	25	7	1	21	5	1	7	16	9	5	113	106	7	4.73	1.87	1.99	.57	2.55	1.87	.45	2.14	3.31	3.73	8.01	2.44	2.32	9.67
8. Erysipelas	2	6	1	5	23	2	16	5	1		3	64	63	1	.59	.45	.28	2.83	2.79	.75	7.22	1.53	.21		4.81	1.38	1.38	1.38
9. Febris intermittens (malaria)	66	273	116	24	323	158	20	37	54	48	5	1,124	1,116	8	19.52	20.41	32.93	13.57	39.18	59.07	9.02	11.34	11.19	19.87	8.01	24.27	24.48	11.05
10. Febris recurrens																												
11. Fractura ossium	39	132	34	26	112	36	26	36	58	34	6	539	535	4	11.54	9.87	9.65	14.71	13.59	13.46	11.73	11.03	12.02	14.07	9.62	11.64	11.73	5.53
12. Gonorrhea	680	1,546	505	199	1,099	244	180	331	532	345	59	5,720	5,610	110	201.12	115.56	143.34	112.56	133.33	91.21	81.19	101.41	110.21	142.80	94.55	123.50	123.05	151.93
13. Hernia	24	87	13	6	39	18	6	9	19	12	5	238	236	2	7.10	6.50	3.69	3.39	4.73	6.73	2.71	2.76	3.94	4.97	8.01	5.14	5.18	2.76
14. Influenza	229	522	212	94	425	50	101	160	71	3	31	1,898	1,883	15	67.73	39.02	60.18	53.17	51.56	18.69	45.56	49.02	14.71	1.24	49.68	40.98	41.30	20.72
15. Insolatio (Hitzschlag, coup de chaleur)	1	1			2	1						5	5		.30	.07			.24	.37						.11	.11	
16. Luxationes articulorum	17	57	8	6	16	11	6	8	16	6	2	153	153		5.03	4.26	2.27	3.39	1.94	4.11	2.71	2.45	3.31	2.48	3.21	3.30	3.36	
17. Meningitis cerebro-spinalis epidemica	5	1			5			2				13	13		1.48	.07			.61			.61				.28	.29	
18. Morbilli	137	111	102	22	287	44	56	59	88	4	10	920	920		40.52	8.30	28.95	12.44	34.82	16.45	25.26	18.08	18.23	1.66	16.03	19.86	20.18	
19. Parotitis epidemica	70	100	40	42	162	43	4	114	60	3	21	659	658	1	20.70	7.47	11.35	23.76	19.65	16.07	1.80	34.93	12.43	1.24	33.65	14.23	14.43	1.38
20. Pleuritis	12	31	14	2	41	2	18	15	12	7	7	161	157	4	3.55	2.32	3.97	1.13	4.97	.75	8.12	4.60	2.49	2.90	11.22	3.48	3.44	5.53
21. Pneumonia crouposa sive lobaris	12	22	6	3	31	7	15	7	14	1	1	119	116	3	3.55	1.64	1.70	1.70	3.76	2.62	6.77	2.14	2.90	.41	1.60	2.57	2.54	4.14
22. Rheumatismus articulorum	55	169	42	35	157	41	97	52	49	27	4	728	715	13	16.27	12.63	11.92	19.80	19.05	15.33	43.75	15.93	10.15	11.18	6.41	15.72	15.68	17.96
23. Scarlatina	2	1			22			8				33	33		.59	.07			2.67			2.45				.71	.72	
24. Scorbutus																												
25. Syphilis	118	309	110	48	174	68	49	54	81	37	24	1,072	1,024	48	34.90	23.10	31.22	27.15	21.11	25.42	22.10	16.54	16.78	15.31	38.46	23.15	22.46	66.30
26. Trachoma	12	23	2			1	1	2				41	41		3.55	1.72	.57			.37	.45	.61				.89	.90	
27. Tuberculosis pulmonum	16	49	15	1	21	10	11	13	10	2	7	155	151	4	4.73	3.66	4.26	.57	2.55	3.74	4.96	3.98	2.07	.83	11.22	3.35	3.31	5.53

28. Tuberculosis ceterorum organorum	3	17	1	...	2	2	1	2	2	1	3	34	32	2	.89	1.27	.28	.....	.24	.75	.45	.61	.41	.41	4.81	.73	.70	2.76
29. Typhus abdominalis	11	34	14	3	27	5	12	5	3	17	5	136	135	1	3.25	2.54	3.97	1.70	3.28	1.87	5.41	1.53	.62	7.04	8.01	2.94	2.96	1.38
30. Typhus exanthematicus	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
31. Ulcus molle	177	297	138	23	257	113	28	53	126	80	14	1,306	1,260	46	52.35	22.20	39.17	13.01	31.18	42.24	12.63	16.24	26.10	33.11	22.44	28.20	27.64	63.54
32. Variola	...	2	1	...	4	...	...	3	2	...	...	12	11	1	.....	.15	.28	.....	.49	.....	.....	.92	.41	.....	.....	.26	.24	1.38
33. Morbi auris	31	113	31	17	73	18	30	24	23	16	4	380	379	1	9.17	8.45	8.80	9.62	8.86	6.73	13.53	7.35	4.76	6.62	6.41	8.20	8.31	1.38
34. Morbi cordis	14	21	12	3	10	8	9	10	10	3	4	104	102	2	4.14	1.57	3.41	1.70	1.21	2.99	4.06	3.06	2.07	1.24	6.41	2.59	2.59	2.76
35. Morbi cutis	105	319	120	35	159	53	19	63	141	60	8	1,082	1,071	11	31.06	23.85	34.06	19.80	19.29	19.81	8.57	19.30	29.21	24.83	12.82	23.36	23.49	15.19
36. Morbi mentis	6	21	6	4	12	7	4	1	5	1	6	73	72	1	1.77	1.57	1.70	2.26	1.46	2.62	1.80	.31	1.04	.41	9.62	1.58	1.58	1.38
37. Morbi oculi	70	195	53	35	128	37	39	60	68	23	5	713	700	13	20.70	14.58	15.04	19.80	15.53	13.83	17.59	18.38	14.09	9.52	8.01	15.39	15.35	17.96
38. Morbi systemat. urin. et sexual (excluding venerie et syphilis)	73	233	54	29	109	63	16	55	59	24	9	724	716	8	21.59	17.42	15.33	16.40	13.22	23.55	7.22	16.85	12.22	9.93	14.42	15.63	15 70	11.05

INTERNATIONAL MILITARY MEDICAL STATISTICS FOR THE YEAR 1908.

The following tables are those agreed upon at the International Commission for the Unification of the Medical Statistics of Armies held at Budapest in 1894 and modified by the last meeting, held at Madrid in 1903. They are calculated for the United States Army proper (white and colored) and include enlisted men only. Dispositions include cases remaining from last year, but do not include cases remaining at the close of the current year. Deaths include suicides and accidents. Days lost include those lost this year by cases remaining from last year.

Table I shows in absolute numbers, by departments, the mean strength of the command, the admissions to quarters, to hospital, and total admissions; the disposition of the sick, total, and the number returned to duty, died, and otherwise disposed of, and the total number of days of sickness.

Table II gives the same data in ratios per 1,000, and also shows the days lost per soldier and per admission.

Table III shows, by arms of service, the mean strength, the total admissions, and those to hospital only, the total dispositions, and the number of those returned to duty, and the number that died.

Table IV gives the same data as Table III by months.

Table V shows for each of 53 of the larger garrisons the mean strength, admissions to hospital, total admissions, and the deaths.

Table VI shows for each of the 38 diseases or disease groups agreed upon by the International Commission the number remaining under treatment at the commencement and close of the current year, the admissions and dispositions for the year, the total sick days, and the average number of days per case.

Table VII shows the admissions by arms of service, for the diseases and disease groups referred to in Table VI.

Table VIII shows the same data as Table VII by months.

Table IX shows deaths by rank, by length of service, and by age.

Table X shows the same data as Table IX for discharges for physical disability.

INTERNATIONAL TABLE I.—*Movement of sick, by army corps (departments), absolute numbers.*

Department.	Mean strength.	Admitted sick.			Sick disposed of.				Total days sick.
		Total.	To hospital.	To quarters.	Returned to duty (recovered).	Died.	Otherwise disposed of.	Total.	
United States (excluding Alaska):									
Department of the East	13,378	15,204	11,489	3,715	14,510	56	483	15,049	158,368
Department of the Gulf	3,523	4,735	3,729	1,006	4,495	21	145	4,661	54,978
Department of the Lakes	3,381	4,728	3,815	913	4,509	16	235	4,760	57,817
Department of the Missouri	8,243	10,332	7,827	2,505	9,946	46	391	10,383	119,640
Department of Dakota	1,768	2,212	1,863	349	2,112	11	81	2,204	24,065
Department of Texas	2,675	2,794	2,404	390	2,684	15	104	2,803	35,004
Department of the Colorado	2,217	2,564	1,997	567	2,431	14	120	2,565	32,043
Department of California	4,827	3,884	1,878	2,006	2,476	19	99	2,594	27,011
Department of the Columbia (excluding Alaska)	3,264	3,575	3,129	446	3,407	19	90	3,516	44,756
Camps of instruction	2,416	2,569	116	2,453	2,014	6	18	2,038	13,523
General hospitals	624	601	545	56	1,922	34	423	2,379	131,099
Total	46,316	53,198	38,792	14,406	50,506	257	2,189	52,952	698,304

INTERNATIONAL TABLE I.—*Movement of sick, by army corps (departments), absolute numbers*—Continued.

Department.	Mean strength.	Admitted sick.			Sick disposed of.				Total days sick.
		Total.	To hospital.	To quarters.	Returned to duty (recovered).	Died.	Otherwise disposed of.	Total.	
Alaska	1,015	426	315	111	408	10	8	426	4,825
The Philippines division:									
Department of Luzon	5,983	9,287	6,797	2,490	8,292	51	200	8,543	94,058
Department of the Visayas	2,107	3,075	2,742	333	2,957	14	103	3,074	46,951
Department of Mindanao	3,753	4,609	3,913	696	4,490	35	81	4,606	60,283
Interisland transports	20	40	46	3	36	1	1	38	469
Division hospital, Manila	108	214	179	35	1,024	12	59	1,095	31,978
Total	11,971	17,234	13,677	3,557	16,799	113	444	17,356	233,739
Cuba	4,694	5,641	3,946	1,695	5,405	22	201	5,628	66,200
Hawaii	255	327	293	34	298	2	16	316	3,510
Army transports	1,155	878	832	46	756	10	10	776	15,112
United States Army	65,406	77,704	57,855	19,849	74,172	414	2,868	77,454	1,021,690

INTERNATIONAL TABLE II.—*Movement of sick, by army corps (departments), proportionate numbers.*

Department.	In 1,000 of mean strength.			In 1,000 disposed of.			Days lost.	
	Total admissions.	Admissions to hospital.	Deaths.	Returned to duty (recovered).	Died.	Otherwise disposed of.	Per soldier.	Per admission.
United States (excluding Alaska):								
Department of the East	1,136.49	858.80	4.19	964.18	3.72	32.10	11.84	10.42
Department of the Gulf	1,344.02	1,058.47	5.96	964.40	4.50	31.10	15.61	11.61
Department of the Lakes	1,398.40	1,128.36	4.73	947.27	3.36	49.37	17.10	12.23
Department of the Missouri	1,253.43	949.53	5.58	957.91	4.43	37.66	14.51	11.58
Department of Dakota	1,251.13	1,053.73	6.22	958.26	4.99	36.75	13.61	10.88
Department of Texas	1,044.49	898.69	5.61	957.55	5.35	37.10	13.08	12.53
Department of the Colorado	1,156.52	900.77	6.31	947.76	5.46	46.78	14.45	12.50
Department of California	804.64	389.06	3.94	954.51	7.32	38.17	5.60	6.95
Department of the Columbia (excluding Alaska)	1,095.28	958.64	5.82	969.00	5.40	25.60	13.71	12.52
Camps of instruction	1,063.33	48.01	2.48	988.22	2.95	8.83	5.60	5.26
General hospitals				807.90	14.30	177.80		
Total	1,148.59	837.55	5.35	953.81	4.85	41.34	15.08	13.13
Alaska	419.70	310.34	9.18	957.75	23.47	18.78	4.75	11.33
Philippines Division:								
Department of Luzon	1,552.23	1,136.05	8.52	970.62	5.97	23.41	15.72	10.13
Department of the Visayas	1,459.42	1,301.38	6.64	961.94	4.55	33.51	22.28	15.27
Department of Mindanao	1,228.08	1,042.63	9.33	974.82	7.60	17.58	16.06	13.08
Interisland transports				947.37	26.32	26.32		
Division hospital, Manila				936.87	10.98	52.15		
Total	1,439.65	1,142.51	9.31	967.91	6.51	25.58	19.53	13.56
Cuba	1,201.75	840.65	4.63	960.38	3.91	35.71	14.10	11.74
Hawaii	1,282.35	1,149.02	7.12	943.04	6.33	50.63	13.76	10.73
Army transports	760.17	720.35	8.31	974.23	12.88	12.89	13.08	17.21
United States Army	1,188.03	884.55	6.13	957.63	5.35	37.02	15.62	13.15

INTERNATIONAL TABLE III.—*Movement of sick by arms of service.*

Arms of service.	Absolute numbers.						Proportionate numbers.				
	Mean strength.	Sick admissions.		Sick disposed of.			Per 1,000 of mean strength.			Per 1,000 sick disposed of.	
		Total.	To hospital.	Total.	Fit for duty (recovered).	Deaths.	Total sick admissions.	Admissions to hospital.	Deaths.[a]	Fit for duty (recovered).	Deaths.
Infantry	23,202	26,980	20,833	26,971	25,709	172	1,162.83	897.90	7.41	953.21	6.38
Cavalry	11,950	17,003	12,499	17,052	16,459	76	1,422.85	1,045.94	6.36	965.22	4.46
Coast artillery	13,698	16,231	11,705	16,005	15,408	64	1,184.92	854.51	4.67	962.70	4.00
Field artillery	4,492	5,409	4,065	5,334	5,146	28	1,204.14	904.94	6.23	964.76	5.25
Engineers	1,726	1,906	1,245	1,921	1,826	15	1,104.29	721.32	8.69	950.55	7.81
Ordnance	671	473	133	475	459	3	704.92	198.22	4.47	966.32	6.32
Signal Corps	1,143	1,122	573	1,121	1,073	7	981.64	501.31	6.12	957.18	6.24
Hospital Corps	3,403	2,491	2,025	2,553	2,388	22	732.00	595.06	6.46	935.36	8.62
Others	5,121	6,089	4,777	6,022	5,704	27	1,189.03	932.83	5.27	947.19	4.42
Total	65,406	77,704	57,855	77,454	74,172	414	1,188.03	884.55	6.13	957.63	5.35

[a] Ratios for deaths based on mean strength, present and absent, total 67,515.

INTERNATIONAL TABLE IV.—*Movement of sick by months, American troops at home.*

Month.	Absolute numbers.						Proportionate numbers.				
	Mean strength.	Sick admissions.		Sick disposed of.			Per 1,000 of mean strength.			Per 1,000 sick disposed of	
		Total.	To hospital.	Total.	Fit for duty (recovered).	Deaths.	Total sick admissions.	Admissions to hospital.	Deaths.[a]	Fit for duty (recovered).	Deaths.
January	38,687	4,782	3,731	4,473	4,253	22	123.61	96.44	0.54	950.82	4.92
February	39,817	4,492	3,486	4,556	4,331	20	112.82	87.55	.49	950.61	4.39
March	40,858	4,548	3,488	4,525	4,302	21	111.31	85.37	.51	950.72	4.64
April	42,247	4,096	3,105	4,221	4,023	20	96.95	73.50	.45	953.09	4.74
May	43,977	3,888	2,964	4,011	3,807	33	88.41	67.40	.73	949.14	8.23
June	46,736	3,905	2,705	3,923	3,717	22	83.55	57.88	.46	947.49	5.61
July	47,441	4,268	2,788	4,244	4,078	17	89.96	58.77	.35	960.89	4.01
August	50,000	4,734	2,709	4,869	4,674	22	94.68	54.18	.43	959.95	4.52
September	49,464	4,421	3,079	4,146	3,935	24	89.38	62.25	.46	949.11	5.79
October	51,009	4,760	3,559	4,712	4,528	14	93.31	69.77	.26	960.95	2.97
November	51,980	4,528	3,425	4,642	4,449	23	87.11	65.89	.42	958.42	4.95
December	53,578	4,776	3,753	4,630	4,409	19	89.14	70.05	.34	952.27	4.10
Total	46,316	53,198	38,792	52,952	50,506	257	1,148.59	837.55	5.35	953.81	4.85

[a] Ratios for deaths based on mean strength, present and absent, total 48,053.

INTERNATIONAL TABLE IV (continued).—*Movement of sick by months, American troops in the Philippine Islands.*

Month.	Absolute numbers.						Proportionate numbers.				
	Mean strength.	Sick admissions.		Sick disposed of.			Per 1,000 of mean strength.			Per 1,000 sick disposed of	
		Total.	To hospital.	Total.	Fit for duty (recovered).	Deaths.	Total sick admissions.	Admissions to hospital.	Deaths.	Fit for duty (recovered).	Deaths.
January	12,287	1,558	1,252	1,458	1,399	9	126.80	101.90	0.76	959.53	6.17
February	11,441	1,499	1,205	1,567	1,510	5	131.02	105.32	.42	963.62	3.19
March	11,972	1,555	1,251	1,601	1,561	11	129.89	104.49	.88	975.02	6.87
April	12,495	1,391	1,156	1,451	1,414	7	111.32	92.52	.56	974.50	4.82
May	11,983	1,310	1,026	1,344	1,307	13	109.32	85.62	1.09	972.47	9.67
June	11,875	1,542	1,219	1,510	1,477	8	129.85	102.65	.67	978.15	5.30
July	11,807	1,492	1,177	1,432	1,374	8	126.37	99.69	.66	959.50	5.59
August	11,802	1,473	1,172	1,454	1,388	9	124.81	99.31	.75	954.61	6.19
September	11,812	1,331	978	1,354	1,319	8	112.68	82.80	.67	974.15	5.91
October	11,843	1,473	1,150	1,481	1,447	7	124.38	97.10	.57	977.04	4.73
November	11,896	1,429	1,119	1,441	1,386	8	120.12	94.06	.66	961.85	5.55
December	12,439	1,181	972	1,263	1,217	20	94.94	78.14	1.60	963.58	15.84
Total	11,971	17,234	13,677	17,356	16,799	113	1,439.65	1,142.51	9.31	967.91	6.51

INTERNATIONAL TABLE V.—*Movement of sick in the larger garrisons.*

Garrisons.	Mean strength.	Total admissions.		Admissions to hospital.		Deaths.	
		Absolute number.	Per 1,000 of mean strength.	Absolute number.	Per 1,000 of mean strength.	Absolute number.	Per 1,000 of mean strength.
Fort Leavenworth, Kans	2,388	2,785	1,166.25	2,379	996.23	4	1.68
Presidio of San Francisco, Cal	2,004	1,437	717.07	(a)	.....	5	2.49
Fort Riley, Kans	1,799	1,865	1,036.69	1,431	795.44	8	4.45
Fort Sam Houston, Tex	1,199	1,091	909.92	983	819.85	1	.83
Columbus Barracks, Ohio	923	1,806	1,956.66	1,642	1,778.98	8	8.67
Jefferson Barracks, Mo	900	1,826	2,028.89	1,191	1,323.33	10	11.11
Fort Monroe, Va	892	945	1,059.42	709	794.84	4	4.48
Fort Slocum, N. Y	873	1,609	1,843.07	1,344	1,539.52	4	4.58
Presidio of Monterey, Cal	796	562	706.03	485	609.30	6	7.54
Vancouver Barracks, Wash	782	871	1,113.81	835	1,067.77	8	10.23
Fort Douglas, Utah	687	954	1,388.65	535	778.75	9	13.10
West Point, N. Y. (soldiers)	668	662	991.02	461	690.12	2	2.99
Fort Sheridan, Ill	667	773	1,158.92	607	910.04	2	3.00
Fort Des Moines, Iowa	641	828	1,291.73	637	993.76	7	10.92
Fort Myer, Va	633	668	1,055.29	589	930.49	2	3.16
Fort Oglethorpe, Ga	623	717	1,150.88	685	1,099.52	6	9.63
Fort D. A. Russell, Wyo	609	572	939.24	558	916.26	10	16.42
Fort Logan, Colo	596	615	1,031.88	592	993.29	3	5.03
Fort Totten, N. Y	588	870	1,479.59	438	744.90	1	1.70
Fort Snelling, Minn	583	761	1,305.32	691	1,185.25	2	3.43
Fort Hancock, N. J	535	701	1,310.28	587	1,097.20	.....	.....
Fort Gibbon, Alaska	226	69	305.31	41	181.42	2	8.85
Fort Liscum, Alaska	180	66	366.67	61	338.89	1	5.56
Fort William H. Seward, Alaska	174	87	500.00	73	419.54	1	5.75
Fort Davis, Alaska	151	79	523.18	49	324.50	2	13.25
Fort St. Michael, Alaska	145	47	324.14	33	227.59	2	13.79
Fort Egbert, Alaska	138	78	565.22	58	420.29	2	14.49
Camp Columbia, Cuba	1,672	1,372	820.57	874	522.73	7	4.19
Camaguey, Cuba	467	502	1,074.95	359	768.74	1	2.14
Matanzas, Cuba	283	399	1,409.89	262	925.80	1	3.53
Pinar del Rio, Cuba	278	371	1,334.53	345	1,241.01	.....	.....
Cardenas, Cuba	252	245	972.22	218	865.08	2	7.94
Santiago, Cuba	238	382	1,605.04	264	1,109.24	1	4.20
Holguin, Cuba	233	344	1,476.39	295	1,266.09	1	4.29
Cienfuegos, Cuba	206	533	2,587.38	309	1,500.00	3	14.56
Guanajay, Cuba	202	338	1,673.27	302	1,495.05	3	14.85
Fort Shafter, Hawaii	235	313	1,331.91	293	1,246.81	2	8.51
Fort William McKinley, P. I	2,354	3,271	1,389.55	2,494	1,059.47	25	10.62
Camp Keithley, P. I	993	787	792.55	743	748.24	14	14.10
Camp Stotsenburg, P. I	981	2,192	2,234.45	1,886	1,922.53	6	6.12
Jolo, P. I	942	1,163	1,234.61	1,133	1,202.76	1	1.06
Camp Jossman, P. I	762	1,338	1,755.91	1,244	1,632.55	11	14.43
Camp McGrath, P. I	697	1,643	2,357.25	1,189	1,705.88	9	12.91
Parang, P. I	530	629	1,186.79	545	1,028.30	7	13.21
Malabang, P. I	448	773	1,725.45	506	1,129.46	5	11.16
Camp Overton, P. I	364	605	1,662.09	466	1,280.22	3	8.24
Zamboanga, P. I	334	530	1,586.83	496	1,485.03	1	2.99
Camp Bumpus, P. I	327	470	1,437.31	326	996.94	1	3.06
Camp Downes, P. I	281	404	1,437.72	377	1,341.64	1	3.56
Warwick Barracks, P. I	279	421	1,508.96	412	1,476.70	.....	.....
Camp Wallace, P. I	254	321	1,263.78	298	1,173.23	1	3.94
Camp Daraga, P. I	253	319	1,260.87	270	1,067.19	.....	.....
Camp Connell, P. I	239	234	979.08	211	882.85	.....	.....

(a) Hospital cases treated in General Hospital, San Francisco, Cal.

INTERNATIONAL TABLE VI.—*Movement of sick according to most important diseases.*

No. international nomenclature.	Diseases of the international nosological table.	Absolute numbers.									Proportionate numbers.				
		Remaining at close of 1907.	Admitted in 1908.	Total remaining and admitted.	Disposed of in 1908.						Per 1,000 of mean strength.		Per 1,000 disposed of.			
					Fit for duty.	Died.	Otherwise.	Total.	Remaining at close of 1908.	Total days sick in 1908.	Admissions.	Deaths.	Fit for duty.	Died.	Otherwise.	Average days of treatment.
1	Alkoholismus acutus, including delirium tremens	21	1,794	1,815	1,722	8	69	1,799	16	7,657	27.42	0.12	957.20	4.45	38.35	4.27
2	Appendicitis, typhlitis and perityphlitis	27	293	320	277	7	15	299	21	10,001	4.48	.10	926.42	23.41	50.17	34.13
3	Bronchitis acuta	36	2,053	2,089	2,010	.....	28	2,038	51	13,840	31.39	.....	986.26	.....	13.74	6.74
4	Cholera Asiatica	.....	14	14	6	8	.....	14	.....	200	.21	.12	428.57	571.43	.....	14.29
5	Cholera nostras	.....	3	3	3	.....	.....	3	.....	9	.05	.....	1,000.00	.....	.....	3.00
6	Diphtheria et croup	3	60	63	50	4	6	60	3	1,037	.92	.06	833.33	66.67	100.00	17.28
7	Dysenteria	66	480	546	482	6	21	509	37	18,755	7.34	.09	946.95	11.79	41.26	39.07
8	Erysipelas	.....	78	78	72	1	2	75	3	1,821	1.19	.01	960.00	13.33	26.67	23.35
9	Febris intermittens (malaria)	36	2,483	2,519	2,453	.....	41	2,494	25	17,737	37.96	.....	983.56	.....	16.44	7.14
10	Febris recurrens	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
11	Fractura ossium	61	734	795	644	20	37	701	94	30,909	11.22	.30	918.69	28.53	52.78	42.11
12	Gonorrhea	366	8,866	9,232	8,322	.....	379	8,701	531	175,427	135.56	.....	956.44	.....	43.56	19.79
13	Hernia	13	298	311	226	2	46	274	37	11,180	4.56	.02	824.82	7.30	167.88	37.52
14	Influenza	115	1,956	2,071	2,033	1	21	2,055	16	11,359	29.91	.01	989.29	.49	10.22	5.81
15	Insolatio (Hitzschlag coup de chaleur)	.....	9	9	9	.....	.....	9	.....	51	.14	.....	1,000.00	.....	.....	5.66
16	Luxationes articulorum	12	226	238	223	1	7	231	7	3,689	3.46	.01	965.37	4.33	30.30	16.32
17	Meningitis cerebro-spinalis epidemica	.....	17	17	3	10	2	15	2	437	.26	.15	200.00	666.67	133.33	25.71
18	Morbilli	4	1,054	1,058	923	8	61	992	66	17,489	16.11	.12	930.45	8.06	61.49	16.59
19	Parotitis epidemica	14	799	813	777	.....	29	806	7	11,715	12.22	.....	964.02	.....	35.98	14.66
20	Pleuritis	10	212	222	191	1	18	210	12	5,270	3.24	.01	909.52	4.76	85.72	24.86
21	Pneumonia crouposa sive lobaris	18	138	156	116	24	8	148	8	4,217	2.11	.36	783.78	162.16	54.06	30.56
22	Rheumatismus articulorum	51	916	967	853	1	58	912	55	23,996	14.01	.01	935.30	1.10	63.60	26.20
23	Scarlatina	3	35	38	37	.....	1	38	.....	1,335	.54	.....	973.68	.....	26.32	38.15
24	Scorbutus	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
25	Syphilis	142	1,726	1,868	1,531	5	168	1,704	164	59,075	26.40	.07	898.48	2.93	98.59	34.23
26	Trachoma	1	47	48	38	.....	4	42	6	847	.72	.....	904.76	.....	95.24	18.02
27	Tuberculosis pulmonum[a]	138	249	387	30	32	180	242	145	53,069	3.81	.47	123.97	132.23	743.80	213.13
28	Tuberculosis ceterorum organorum	5	46	51	26	4	11	41	10	4,017	.70	.05	634.15	97.55	268.30	8.73
29	Typhus abdominalis	21	215	236	179	21	9	209	27	13,551	3.29	.31	856.46	100.48	43.06	63.03
30	Typhus exanthematicus	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

31	Ulcus molle	151	2,105	2,256	2,046	.....	79	2,125	131	44,414	32.19	.....	962.82	.....	37.18	21.10
32	Variola	.....	15	15	11	.....	1	12	3	482	.23	.....	916.67	.....	83.33	32.13
33	Morbi auris	28	609	637	569	2	44	615	22	11,300	9.31	.03	925.20	3.25	71.55	18.55
34	Morbi cordis [b]	12	152	164	70	17	63	150	14	6,423	2.32	.24	466.67	113.33	420.00	42.26
35	Morbi cutis [c]	33	1,772	1,805	1,729	1	33	1,763	42	16,983	27.10	.01	980.71	.57	18.72	9.58
36	Morbi mentis [d]	13	98	111	10	.....	82	92	19	7,062	1.50	.....	108.70	.....	891.30	72.06
37	Morbi oculi	43	972	1,015	916	.....	54	970	45	13,614	14.86	.....	944.33	.....	55.67	14.01
38	Morbi systemat. urin. et sexual (excluding venerie et syphilis)	38	1,030	1,068	944	13	70	1,027	41	17,108	15.75	.19	919.18	12.66	68.16	16.61

[a] Includes tuberculosis of lungs and larynx.
[b] Includes pericarditis and endocarditis.
[c] Includes diseases of the skin proper.
[d] Includes insanity only.

INTERNATIONAL TABLE VII.—*Most important diseases by arms of service.*

No. international nomenclature.	Diseases of the international nosological table.	Absolute numbers—Admissions by arms of service.									Proportionate numbers—Admissions per 1,000 of mean strength.								
		Infantry.	Cavalry.	Coast artillery.	Field artillery.	Engineers.	Ordnance.	Signal Corps.	Hospital Corps.	Others.	Infantry.	Cavalry.	Coast artillery.	Field artillery.	Engineers.	Ordnance.	Signal Corps.	Hospital Corps.	Others.
1	Alkoholismus acutus, including delirium tremens	701	176	555	54	64	19	42	110	73	30.21	14.73	40.52	12.02	37.08	28.32	36.75	32.32	14.25
2	Appendicitis, typhlitis and perityphlitis	112	36	68	19	10	2	6	28	12	4.83	3.01	4.96	4.23	5.79	2.98	5.25	8.23	2.34
3	Bronchitis acuta	659	371	527	126	59	35	39	78	159	28.40	31.05	38.47	28.05	34.18	52.16	34.12	22.92	31.05
4	Cholera Asiatica	9	3			2					.39	.25			1.16				
5	Cholera nostras	1		1					1		.04		.07					.29	
6	Diphtheria et croup	20	7	24	3			1	3	2	.86	.59	1.75	.67			.87	.88	.39
7	Dysenteria	319	65	21	13	15		8	34	5	13.75	5.44	1.53	2.89	8.69		7.00	9.99	.98
8	Erysipelas	33	19	3	6	1	3		2	11	1.42	1.59	.22	1.34	.58	4.47		.59	2.15
9	Febris intermittens (malaria)	766	794	310	257	73	14	18	73	178	33.01	66.44	22.63	57.21	42.29	20.86	15.75	21.45	34.76
10	Febris recurrens																		
11	Fractura ossium	190	215	145	97	30	5	9	17	26	8.19	17.99	10.59	21.59	17.38	7.45	7.87	5.00	5.08
12	Gonorrhea	3,539	1,798	1,703	670	245	18	100	227	566	152.53	150.46	124.32	149.15	141.95	26.83	87.49	66.70	110.52
13	Hernia	103	47	44	14	8	4	4	15	59	4.44	3.93	3.21	3.12	4.63	5.96	3.50	4.41	11.52
14	Influenza	545	366	626	68	60	28	28	128	107	23.49	30.63	45.70	15.14	34.76	41.73	24.50	37.61	20.89
15	Insolatio (Hitzschlag, coup de chaleur)	3	3	1	2						.13	.25	.07	.45					
16	Luxationes articulorum	72	54	55	23	5		2	4	11	3.13	4.52	4.02	5.12	2.90		1.75	1.18	2.15
17	Meningitis cerebro-spinalis epidemica	2	2	2	1					10	.09	.17	.15	.22					1.95
18	Morbilli	351	124	223	112	18		5	35	186	15.13	10.38	16.28	24.93	10.43		4.37	10.28	36.32
19	Parotitis epidemica	260	124	177	119	5		23	44	47	11.21	10.38	12.92	26.49	2.90		20.12	12.93	9.18
20	Pleuritis	95	31	48	8	10	1	1	8	10	4.09	2.59	3.50	1.78	5.79	1.49	.87	2.35	1.95
21	Pneumonia crouposa sive lobaris	54	17	21	11	3		4	11	17	2.33	1.42	1.53	2.45	1.74		3.50	3.23	3.32
22	Rheumatismus articulorum	367	172	181	70	20	5	8	33	60	15.82	14.39	13.21	15.58	11.59	7.45	7.00	9.70	11.72
23	Scarlatina	21	3	1	4	2			2	2	.90	.25	.07	.89	1.16			.59	.39
24	Scorbutus																		
25	Syphilis	731	363	316	138	29	9	14	58	68	31.51	30.38	23.07	30.72	16.80	13.41	12.25	17.04	13.28
26	Trachoma	7	2	6					2	30	.30	.17	.44					.59	5.86
27	Tuberculosis pulmonum [a]	98	40	51	12	3	5	10	14	16	4.22	3.35	3.72	2.67	1.74	7.45	8.75	4.11	3.12
28	Tuberculosis ceterorum organorum	22	4	6	3			2	5	4	.95	.33	.44	.67			1.75	1.47	.78
29	Typhus abdominalis	75	57	33	10	3	1	12	11	13	3.23	4.77	2.41	2.23	1.74	1.49	10.50	3.23	2.54
30	Typhus exanthematicus																		
31	Ulcus molle	875	484	398	147	46	1	28	36	90	37.71	40.50	29.06	32.72	26.65	1.49	24.50	10.58	17.57
32	Variola	7	3	1					2	2	.30	.25	.07					.59	.39
33	Morbi auris	244	106	115	38	13	1	7	28	57	10.52	8.87	8.40	8.46	7.53	1.49	6.12	8.23	11.13

34	Morbi cordis [b]	49	24	35	11	4	1	4	7	17	2.11	2.01	2.56	2.45	2.32	1.49	3.50	2.06	3.32
35	Morbi cutis [c]	704	360	373	108	27	7	19	27	147	30.34	30.13	27.23	24.04	15.64	10.43	16.62	7.93	28.70
36	Morbi mentis [d]	42	16	24	2	2	....	3	1	8	1.81	1.34	1.75	.45	1.16	.....	2.62	.29	1.56
37	Morbi oculi	316	188	192	72	26	10	15	41	112	13.62	15.73	14.02	16.03	15.06	14.90	13.12	12.05	21.87
38	Morbi Systemat. urin. et sexual (excluding venerie et syphilis)	342	224	226	77	17	5	11	44	84	14.74	18.74	16.50	17.14	9.85	7.45	9.62	12.93	16.40

[a] Includes tuberculosis of lungs and larynx. [b] Includes pericarditis and endocarditis. [c] Includes diseases of the skin proper. [d] Includes insanity only.

INTERNATIONAL TABLE VIII.—*Most important diseases, by months.*

Number of international nomenclature.	Diseases of the international nosological table.	Admissions, by months.											
		January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
1	Alkoholismus acutus, including delirium tremens	129	148	139	144	136	129	149	141	158	154	173	194
2	Appendicitis, typhlitis, perityphlitis	21	27	18	25	29	24	30	24	21	31	22	21
3	Bronchitis acuta	248	230	224	188	123	113	107	103	154	169	183	211
4	Cholera Asiatica	.....	.....	.....	1	.....	2	1	2	4	3	1	.....
5	Cholera nostras	.....	.....	.....	2	.....	.....	1	.....	.....	.....	.....	.....
6	Diphtheria et croup	2	6	4	5	3	5	8	2	3	2	6	14
7	Dysenteria	70	48	39	36	47	42	34	35	38	30	28	33
8	Erysipelas	11	6	16	15	8	6	1	1	1	2	7	4
9	Febris intermittens (malaria) [a]	218	180	193	180	205	208	200	282	261	293	127	136
10	Febris recurrens	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
11	Fractura ossium	47	48	70	50	51	66	63	60	63	73	83	60
12	Gonorrhea	643	558	615	641	620	718	816	853	884	865	799	854
13	Hernia	29	23	21	26	21	21	19	29	26	26	29	28
14	Influenza	770	490	277	122	91	22	11	30	32	21	34	56
15	Insolatio (Hitzschlag, coup de chaleur)	.....	.....	1	1	1	.....	1	2	1	2	.....	.....
16	Luxationes articulorum	20	14	16	21	19	18	13	24	18	27	20	16
17	Meningitis cerebro-spinalis epidemica	4	1	4	3	1	.....	.....	.....	.....	.....	.....	4
18	Morbilli	156	256	263	147	65	27	42	2	3	3	4	86
19	Parotitis epidemica	89	168	212	121	89	31	16	7	11	21	22	12
20	Pleuritis	17	22	24	10	20	18	18	18	15	18	18	14
21	Pneumonia crouposa sive lobaris	19	21	17	15	7	5	5	3	9	12	13	12
22	Rheumatismus articulorum	59	85	106	123	101	77	69	36	56	68	62	74
23	Scarlatina	10	14	3	3	2	1	.....	2	.....	.....	.....	.....
24	Scorbutus	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
25	Syphilis	181	102	147	125	125	140	147	145	169	137	157	151
26	Trachoma	.....	.....	2	4	7	3	10	5	4	4	3	5
27	Tuberculosis pulmonum [b]	22	16	17	28	25	24	25	21	16	15	16	24
28	Tuberculosis ceterorum organorum	6	2	5	3	4	3	5	3	5	5	2	3
29	Typhus abdominalis	29	8	7	10	11	15	21	32	28	26	14	14
30	Typhus exanthematicus	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
31	Ulcus molle	187	162	164	151	124	167	175	193	237	199	181	165
32	Variola	.....	.....	1	2	5	2	1	.....	.....	.....	3	1
33	Morbi auris	66	62	56	49	51	53	56	50	38	45	50	33
34	Morbi cordis [c]	13	9	18	10	17	7	12	13	15	12	18	8
35	Morbi cutis [d]	127	125	131	132	150	143	199	168	140	181	144	132
36	Morbi mentis [e]	5	7	8	9	6	9	12	8	8	10	12	4
37	Morbi oculi	78	80	105	78	87	75	89	79	73	69	64	95
38	Morbi systemat. urin. et sexual (excluding venerie et syphilis)	83	75	104	97	79	88	103	88	67	89	77	80

[a] Malarial fever, intermittent only.
[b] Includes tuberculosis of the lungs and larynx.
[c] Includes pericarditis and endocarditis.
[d] Includes all diseases of the skin proper.
[e] Includes insanity only.

INTERNATIONAL TABLE IX.—*Deaths by rank, by length of service, and by age.*

Cause of death.	Total number of deaths (enlisted men).		Deaths by rank and length of service.				Deaths by age.					
	Absolute numbers.	Per 1,000 of mean strength.	Noncommissioned officers.	Soldiers in first year of service.	Soldiers in second year of service.	Soldiers in third year of service and beyond.	20 and under.	21 to 25.	26 to 30.	31 to 35.	36 to 40.	41 and over.
Death from sickness.. Soldiers present with troops	158	2.34	33	63	9	53	9	63	33	18	13	22
Death from sickness.. Soldiers absent from troops	77	1.14	21	9	8	39	3	21	18	14	10	11
Accidental deaths... Soldiers present with troops	108	1.60	17	36	20	35	7	52	22	14	9	4
Accidental deaths... Soldiers absent from troops	10	.15	.....	5	.....	5	1	6	1	2	.....	.....
Suicides.... Soldiers present with troops	36	.53	11	5	2	18	2	9	11	7	4	3
Suicides.... Soldiers absent from troops	3	.04	1	.....	1	1	....	1	2	....	.....	.....
Grand total	392	5.81	83	118	40	151	22	152	87	55	36	40

NOTE.—Twenty-two homicides are not included in the above table.

INTERNATIONAL TABLE X.—*Discharges from the Army for physical disability, temporary or permanent, by rank, length of service, and by age.*

Cause of discharge.	Total discharges (enlisted men).		Rank and length of service.				Age.					
	Absolute numbers.	Per 1,000 of mean strength.	Noncommissioned officers.	Soldiers in first year of service.	Soldiers in second year of service.	Soldiers in third year of service and beyond.	20 and under.	21 to 25.	26 to 30.	31 to 35.	36 to 40.	41 and over.
Physical disability existent prior to enlistment	565	8.37	2	494	45	24	77	348	106	34	2	....
Physical disability incident to service	479	7.09	68	132	56	223	20	269	135	61	34	20
Physical disability not incident to service	204	3.02	4	86	37	77	6	116	53	19	6	4
Grand total	1,248	18.48	74	712	138	324	103	671	294	114	42	24

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U. S. ARMY

TO THE SECRETARY OF WAR

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REPORT OF THE SURGEON-GENERAL OF THE ARMY.

War Department,
Office of the Surgeon-General,
Washington, July 1, 1910.

Sir: I have the honor to submit herewith a report upon the work of the Medical Department of the Army, together with a financial statement for the fiscal year ending June 30, 1910, and a study of the health and sanitary conditions of the army for the calendar year 1909.

HEALTH OF THE ARMY.

OFFICERS.

The mean strength of officers was 3,822 as obtained from the returns of the Medical Department and 4,283 from the office of The Adjutant-General.

There were 2,404 admissions, 18 deaths, and 115.7 constantly noneffective from all causes, equal to ratios of 628.99, 4.20 and 30.27, as compared with ratios of 575.47, 4.85 and 29.41 for the year 1908.

The admission and constantly noneffective rates were a little higher than for 1908.

The principal causes of admission in the order of their importance were influenza, 51.02; bronchitis, 40.55; diarrhea and enteritis, 33.23; sprains and muscular strains, 31.40; malarial fevers, 26.69, and dengue, 24.33.

OFFICERS RETIRED.

Fifty-one officers were retired on account of disability during the year, making a rate of retirement for disability of 11.91 per 1,000, which is slightly lower than last year, and by comparison with which it may be noted that the discharge rate for disability in enlisted men is 16.84. Three officers were retired on account of gunshot wounds and two for other injuries.

The following are the principal diseases for which retirements were made:

Officers retired on account of disabilities.

Organic heart disease	9
Neurasthenia	7
Chronic amœbic dysentery	3
Tuberculosis	3
Insanity	3
Deafness	2
Aneurism	2
Other diseases	17
Result of gunshot wounds	3
Result of other injuries	2
Total	51

Rate, 11.91 per 1,000.

Rank and age of officers retired.

Rank.	Number.	Age.							
		25–29.	30–34.	35–39.	40–44.	45–49.	50–54.	55–59.	60–64.
Brigadier-generals	3							1	2
Colonels	3							2	1
Lieutenant-colonels	4						4		
Majors	13		1	4	1	4	2	1	
Captains	17		6	4	4	2		1	
First lieutenants	7	2	2	2	1				
Second lieutenants	4	2	1	1					
Total	51	4	10	11	6	6	6	5	3

TEST EXERCISES FOR FIELD OFFICERS.

Of the 659 officers of field rank who are subject to the annual physical test, 38 were excused in 1909. In 13 the disability was regarded as permanent; in 20 it was temporary, and 5 were excused for other reasons than physical disability. Of the 13 officers reported as permanently disabled, 6 have been since retired, 1 has died, and 6 still remain on the active list; of those temporarily disabled, 5 afterwards successfully underwent the test, and of those excused 7 were 60 years of age or over. As regards the rank and arm of the service, they were distributed as follows:

Arm of service.	Rank.			
	Colonel.	Lieutenant-colonel.	Major.	Total.
Infantry	4	2	2	8
Cavalry		2	2	4
Field Artillery	1	1		2
Coast Artillery Corps	2		2	4
Engineers	4	3		7
Medical Department		1	2	3
Quartermaster's Department		1	2	3
Other staff departments	1	2	4	7
Total	12	12	14	38

ENLISTED MEN.

The mean enlisted strength of the army, American troops, white and colored, for the year 1909, as reported on the monthly sick reports of the Medical Department, was 74,319, and on the returns of The Adjutant-General's office 75,399. The former represents the strength of the commands from which the sick returns were made and was used in calculating all ratios except those for deaths and discharges. As all deaths and discharges were reported, even of those absent from a command, the total strength as obtained from The Adjutant-General was used in calculating ratios pertaining to those headings. This shows a considerable increase in strength over the year 1908, for which the medical returns showed 65,406 and The Adjutant-General's office 67,515.

During the year 1909 American troops were stationed in the United States proper, the Philippine Islands, Alaska, Hawaii, and Cuba, from which island the army of Cuban pacification was withdrawn during the months of February and March, 1909. Native troops served in Porto Rico and the Philippines.

Statistics for the native troops—Porto Rican and Filipino—have been separately compiled, and when reference is made to the "army" in this report, the American Army proper, white and colored troops, is meant.

As in many diseases, notably the venereal and malarial, the same soldier is often admitted several times on account of the same case of illness, the total number of admissions is necessarily considerably greater than the actual number of cases. The extent of this discrepancy for diseases and injury is 7.69 per cent, as shown in the following table, in which, however, only those diseases are shown where the difference between admissions and cases was 10 or more:

TABLE No. 1.—*Admissions and cases compared, United States Army, 1909.*

	Admissions and cases (men) compared.			
	Admissions.	Cases (men).	Excess of admissions over cases.	Percentage of admissions deducted to show cases.
Inoculation against typhoid fever (3 usually given)	202	155	47	23.27
Malarial fever	2,855	2,497	358	12.54
Influenza	2,008	1,936	72	3.59
Dysentery	675	618	57	8.44
Dengue	1,695	1,576	119	7.02
Mumps	720	709	11	1.53
Vaccinia	1,130	1,105	25	2.21
Tuberculosis (all)	350	337	13	3.71
Syphilis	2,263	1,839	424	18.74
Chancroids	2,287	2,122	165	7.21
Gonorrhea	10,090	8,644	1,446	14.33
Acute articular rheumatism	567	494	73	12.87
Rheumatism, articular, subacute, and chronic	413	348	65	15.74
Alcoholism	1,775	1,501	274	15.44
Epilepsy	129	112	17	13.18
Neuralgia	452	416	36	7.96
Conjunctivitis, acute	576	533	43	7.47
Errors of refraction	108	96	12	11.11
Diseases of the middle and internal ear	454	390	64	14.10
Organic disease of the heart	167	142	25	14.97
Varicocele	207	195	12	5.80
Hemorrhoids	507	483	24	4.73
Adenitis, nonvenereal	431	401	30	6.96
Functional disease of the heart	178	162	16	8.99
Coryza	1,692	1,563	129	7.62
Chronic nasal catarrh	60	49	11	18.33
Acute bronchitis	2,329	2,194	135	5.80
Chronic bronchitis	192	177	15	7.81
Pleurisy	190	177	13	6.84
Asthma	110	69	41	37.27
Diseases of the teeth, gums, and alveoli	749	722	27	3.60
Tonsillitis	4,039	3,776	263	6.51
Other diseases of the pharynx	1,028	997	31	3.02
Dyspepsia	1,849	1,751	98	5.30
Gastritis	872	803	69	7.91
Diarrhea, acute	1,820	1,732	88	4.84
Enteritis	663	639	24	3.62
Intestinal parasites	387	367	20	5.17
Hernia	268	243	25	9.33
Constipation	1,764	1,666	98	5.56
Appendicitis	347	320	27	7.78
Hydrocele	49	39	10	20.41
Orchitis, nonvenereal	224	212	12	5.36
Furunculosis	1,960	1,693	267	13.62
Acute abscess, phlegmon	1,080	1,030	50	4.63
Corns and warts	345	316	29	8.41
Ingrowing nails	445	425	20	4.49
Dermatitis from poisonous plants	389	356	33	8.48
Eczema and pemphigus	235	218	17	7.23
Scabies	424	394	30	7.08
Dhobie itch	212	199	13	6.13
Synovitis	160	142	18	11.25
Muscular rheumatism and myalgia	1,741	1,586	155	8.90
Congenital malformations	130	112	18	13.85
Febricula, simple, continued, and other undetermined fevers	470	456	14	2.98
Debility following operation and disease	195	185	10	5.13

TABLE NO. 1.—*Admissions and cases compared, United States Army, 1909*—Continued.

	Admissions and cases (men) compared.			
	Admissions.	Cases (men).	Excess of admissions over cases.	Percentage of admissions deducted to show cases.
Under observation, undiagnosed, and unknown	565	543	22	3.89
Fractures	804	786	18	2.24
Dislocations	219	207	12	5.48
Sprain	3,551	3,354	197	5.55
Strain, muscular	679	659	20	2.95
Abrasions and blisters (mechanical)	1,173	1,121	52	4.43
Contusions	3,098	2,965	133	4.29
Wounds:				
Contused	490	480	10	2.04
Incised	969	957	12	1.24
Lacerated	1,250	1,217	33	2.64
Punctured	509	499	10	1.96
Secondary results of injuries	527	483	44	8.35
Diseases and injuries, except as shown in detail	8,509	8,233	276	3.24
Grand total	79,000	72,923	6,077	7.69
Total for diseases	64,354	58,827	5,527	8.59
Total for external causes	14,646	14,096	550	3.76

CONSTANTLY NONEFFECTIVE RATE.

The constantly noneffective rate, which is the true measure of the loss in efficiency of the army from sickness and injury, was 41.48 per 1,000, as compared with 42.68 for 1908, 46.17 for 1907, and 49.79 for 1906.

TOTAL ADMISSIONS TO SICK REPORT.

The total number of admissions to sick report was 79,000, equal to an admission rate of 1,062.99, as compared with 1,188.03 for the previous year and 1,218.26 for 1907.

DEATHS FROM ALL CAUSES.

The deaths from all causes number 370, of which 228 were from disease. The death rate for all causes was 4.91, and 3.02 for disease, as compared with 6.13 and 3.48, respectively, for the preceding year.

In the action with the outlaw Jakiri and his band on the island of Patian in the Department of Mindanao, in the early part of July, 1909, there were 2 soldiers killed instantly and 2 died of wounds received. In addition to these there were 3 officers and 11 enlisted men wounded. There were 2 American soldiers killed by Moros while walking post in the Department of Mindanao, P. I.

DISCHARGES FOR DISABILITY.

The discharges for disability numbered 1,270, the rate being 16.84, as compared with 18.48 for 1908 and 20.15 for 1907.

ADMISSION RATES FOR DISEASE.

The ratio for 1909 was 865.92 per 1,000 of mean strength; for the previous year, 962.88, and for the decade 1,379.25. By reference to Chart A, below, it will be seen that the health of the army has constantly improved since the year 1899, when its admission rate for disease alone was 2,125.74.

CHART A.—*Showing the total admission rate for disease, by years, since 1888, for the army.*

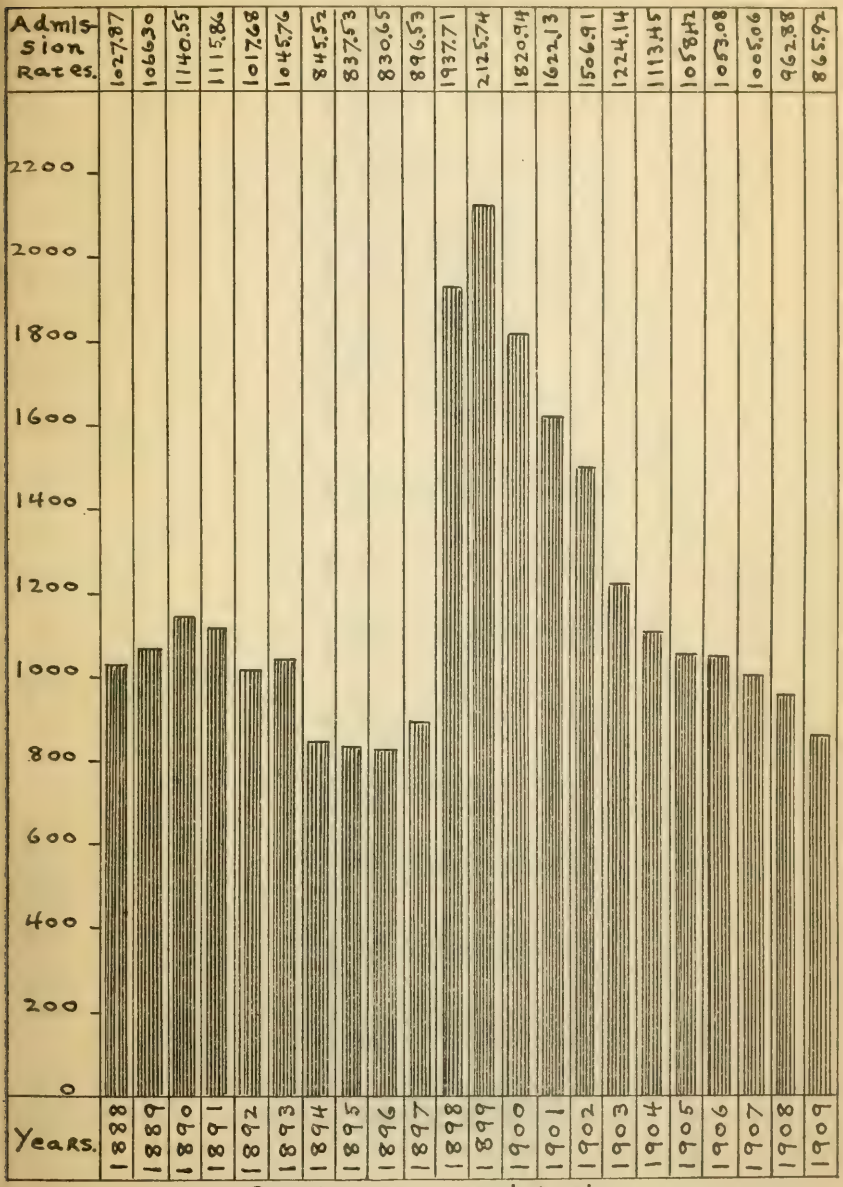


TABLE NO. 2.—*Numerical view of the effect of disease and injury on United States troops serving at home and abroad in the year 1909, compared with corresponding data for the year 1908, by countries—Absolute numbers.*

American troops (enlisted).		Mean strength.	Admitted.			Discharged on surgeon's certificate of disability.			Died.			Total losses.			Noneffective from sickness.	
			Total.	Disease.	Injury.	Total.	Disease.	Injury.	Total.	Disease.	Injury.	Total.	Disease.	Injury.	Days treated.	Constantly noneffective.
United States	1909	57,124	58,516	46,943	11,573	1,081	974	107	277	170	107	1,358	1,144	214	827,723	2,267.73
	1908	46,316	53,198	42,699	10,499	1,026	920	106	257	149	108	1,283	1,069	214	698,304	1,907.93
Alaska	1909	1,064	415	300	115	5	1	4	2	.....	2	7	1	6	6,299	17.26
	1908	1,015	426	275	151	4	3	1	10	3	7	14	6	8	4,825	13.18
Cuba	1909	604	482	406	76	2	2	.....	1	1	.....	3	3	.....	6,524	17.87
	1908	4,694	5,641	4,456	1,185	102	99	3	22	12	10	124	111	13	66,200	180.87
Philippine Islands	1909	12,844	17,314	14,854	2,460	151	139	12	85	54	31	236	193	43	246,467	675.25
	1908	11,971	17,234	14,459	2,775	105	83	22	113	61	52	218	144	74	233,739	638.63
Hawaii	1909	1,014	1,197	851	346	15	14	1	2	1	1	17	15	2	19,452	53.29
	1908	255	327	262	65	11	10	1	2	1	1	13	11	2	3,510	9.59
Army transports	1909	1,669	1,076	1,000	76	.....	.....	.....	3	2	1	3	2	1	18,868	51.69
	1908	1,155	878	827	51	.....	.....	.....	10	9	1	10	9	1	15,112	41.29
Total	**1909**	**74,319**	**79,000**	**64,854**	**14,646**	**1,270**	**1,146**	**124**	**370**	**228**	**142**	**1,640**	**1,374**	**266**	**1,125,333**	**3,083.10**
	1908	65,406	77,704	62,978	14,726	1,248	1,115	133	414	235	179	1,662	1,350	312	1,021,690	2,791.50
Regular Army, American troops, 1899 to 1908		65,500	1,045,804	903,411	142,393	15,458	13,563	1,895	7,201	4,880	2,321	22,659	18,443	4,216	.....	.....

TABLE NO. 3.—*Numerical view of the effect of disease and injury on United States troops serving at home and abroad in the year 1909, compared with corresponding data for the year 1908, by countries—Proportionate numbers.*

American troops (enlisted).		Mean strength.	Admitted.			Discharged on surgeon's certificate of disability.			Died.			Total losses.			Constantly noneffective.	Days treated.	
			Total.	Disease.	Injury.	Total.	Disease.	Injury.	Total.	Disease.	Injury.	Total.	Disease	Injury.		Each soldier.	Each case.
United States	1909	57,124	1,024.37	821.77	202.59	18.87	17.01	1.87	4.84	2.97	1.87	23.71	19.98	3.74	39.70	14.49	14.15
	1908	46,316	1,148.59	921.91	226.68	21.35	19.15	2.21	5.35	3.10	2.25	26.70	22.24	4.46	41.19	15.08	13.13
Alaska	1909	1,064	390.04	281.95	108.08	4.36	.87	3.49	1.75	.....	1.75	6.11	.87	5.24	16.22	5.92	15.18
	1908	1,015	419.70	270.94	148.77	3.67	2.75	.92	9.17	2.75	6.42	12.84	5.50	7.34	12.99	4.75	11.33
Cuba	1909	604	798.01	672.19	125.83	3.31	3.31	.....	1.66	1.66	.....	4.97	4.97	.....	29.59	10.80	13.54
	1908	4,694	1,201.75	949.30	252.45	21.46	20.83	.63	4.63	2.53	2.10	26.09	23.36	2.73	38.53	14.10	11.74
Philippine Islands	1909	12,844	1,348.02	1,156.49	191.53	11.43	10.52	.91	6.43	4.09	2.35	17.86	14.61	3.26	52.27	19.19	14.24
	1908	11,971	1,439.65	1,207.84	231.81	8.65	6.84	1.81	9.31	5.03	4.28	17.96	11.87	6.09	53.35	19.53	13.56
Hawaii	1909	1,014	1,180.47	839.25	341.22	13.80	12.88	.92	1.84	.92	.92	15.64	13.80	1.84	52.56	19.18	16.25
	1908	255	1,282.35	1,027.45	254.90	39.15	35.59	3.56	7.12	3.56	3.56	46.27	39.15	7.12	37.61	13.76	10.73
Army transports	1909	1,669	644.70	599.16	45.54	.....	.....	.....	1.45	.96	.48	1.45	.96	.48	30.97	11.30	17.53
	1908	1,155	760.17	716.02	44.16	.....	.....	.....	8.31	7.48	.83	8.31	7.48	.83	35.75	13.08	17.21
Total	**1909**	**74,319**	**1,062.99**	**865.92**	**197.07**	**16.84**	**15.20**	**1.64**	**4.91**	**3.02**	**1.88**	**21.75**	**18.22**	**3.52**	**41.48**	**15.14**	**14.24**
	1908	65,406	1,188.03	962.88	225.15	18.48	16.51	1.97	6.13	3.48	2.65	24.62	19.99	4.62	42.68	15.62	13.15
Regular Army, American troops, 1899 to 1908		65,500	1,596.65	1,379.25	217.39	23.30	20.44	2.86	10.85	7.35	3.50	34.15	27.79	6.36	.....	.....	.....

EXTERNAL CAUSES.

There were 215 admissions for gunshot wounds, including 13 shot in action, with 51 deaths, including 2 killed and 4 who died of wounds incurred in action, and 25 suicides by gunshot wounds. Eighteen were discharged on account of gunshot wounds.

Wounds other than gunshot (contused, lacerated, incised, and punctured) caused 3,218 admissions, 17 deaths, and 18 discharges.

Drowning caused 28 deaths (1 suicidal); poisoning (acute) 11 deaths (4 suicidal).

There were 33 suicides, 15 homicides, and 4 deaths "shot by sentry or guard."

There were no deaths from sunstroke, freezing, or lightning stroke.

NONEFFECTIVE RATES FOR DISEASE.

The accompanying chart, "D," giving the total noneffective rates for diseases for the two past decades, shows in a striking way the increase in sickness due to the exposures to tropical climates and conditions consequent upon the occupation of new territory during and since the Spanish-American war. It also shows a steady diminution in sickness after the first year of colonial expansion in 1898, with the rapid advance of our knowledge of tropical diseases and preventive medicine and the establishment of more sanitary conditions of living in our tropical possessions.

The progressive improvement since 1898 has been due chiefly to sanitary control of the infectious fevers—malarial, typhoid, and yellow fever. It would be even greater than at present if it had not been offset to a considerable extent by the formidable increase in the venereal diseases and tuberculosis.

VENEREAL DISEASE.

The slight diminution in the occurrence of venereal diseases last year gave hope that the campaign of education on this subject which has been begun through the medical officers was beginning to bear fruit, but 1909 unfortunately shows an increase not only over the preceding year, but over any other year of which there is record, except 1905. The total number of admissions was 14,640, representing 12,605 cases, with an admission rate of 196.99, as compared with 194.13 for the preceding year, and a constant noneffective rate of 13.07 as compared with 11.65. (See Chart B.) Disheartening as is this record, it is, if one may accept the opinions of high medical authorities, exceeded by the prevalence of these diseases in civil life, and it will be very difficult to make any substantial improvement in the record of the army in this respect until the state and municipal authorities are aroused to the necessity of taking serious sanitary measures to restrict their ravages. Attention is invited to a fuller discussion of this question under the heading of "Venereal diseases, United States, continental," page 58.

CHART B.—*Showing the admission rates for venereal diseases and alcoholism in the army, years 1897 to 1909.*

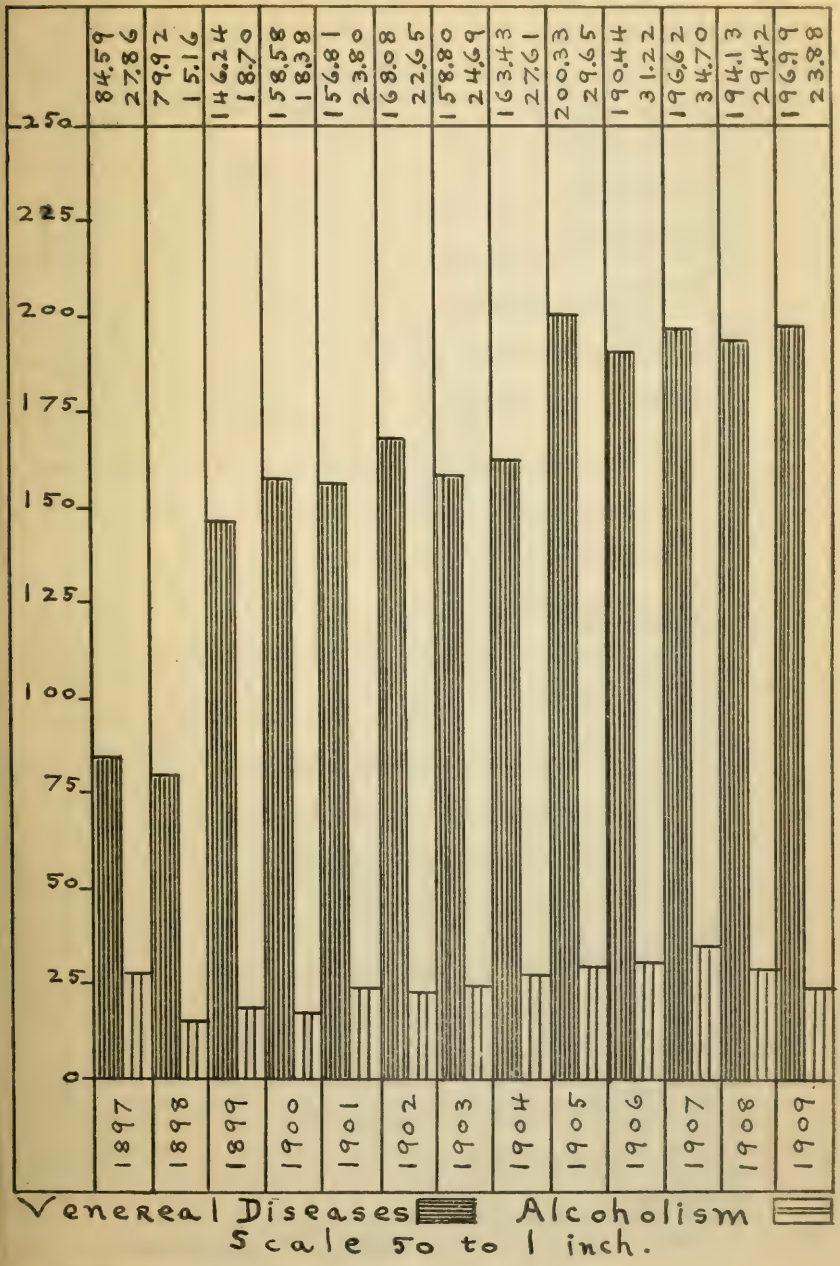


CHART C.—*Showing total death, discharge, and noneffective rates for disease, by years, since 1888, for the army.*

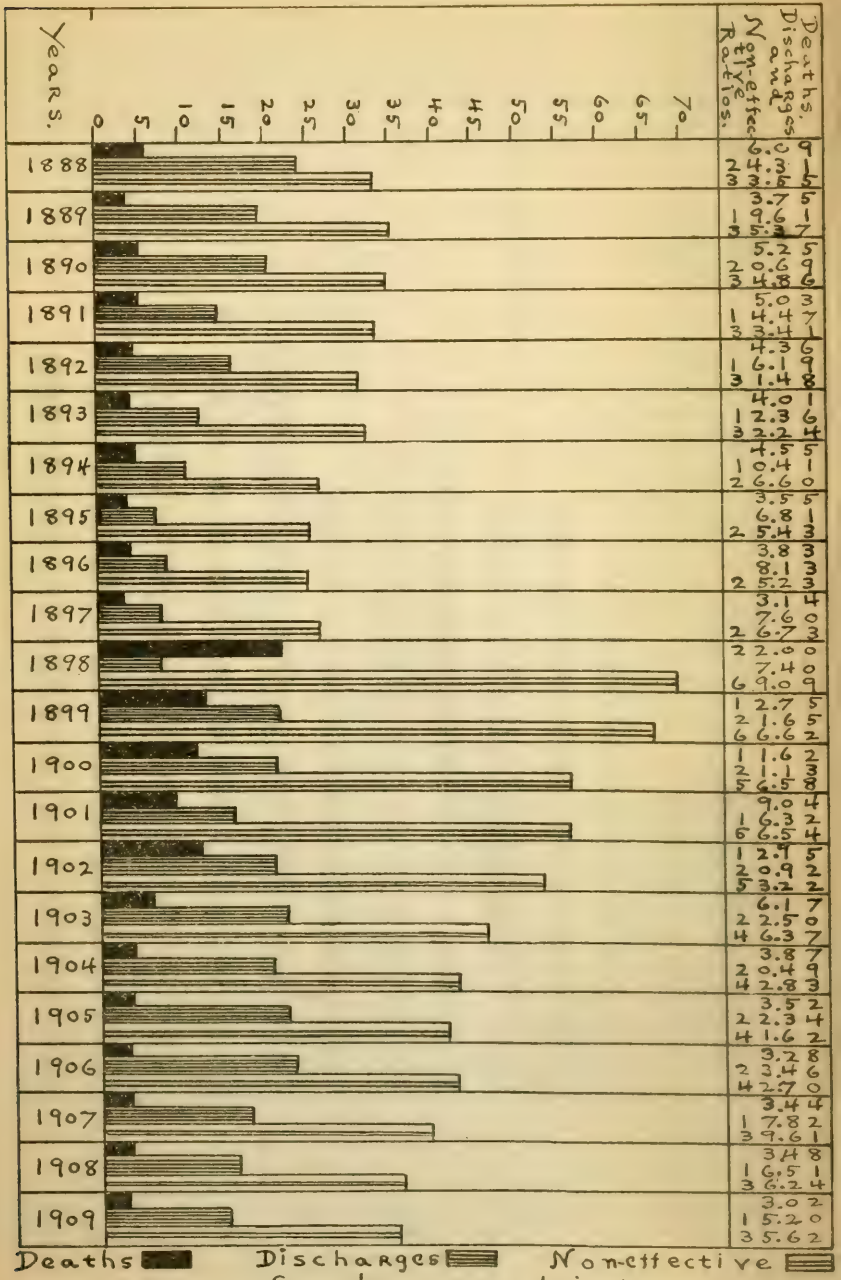
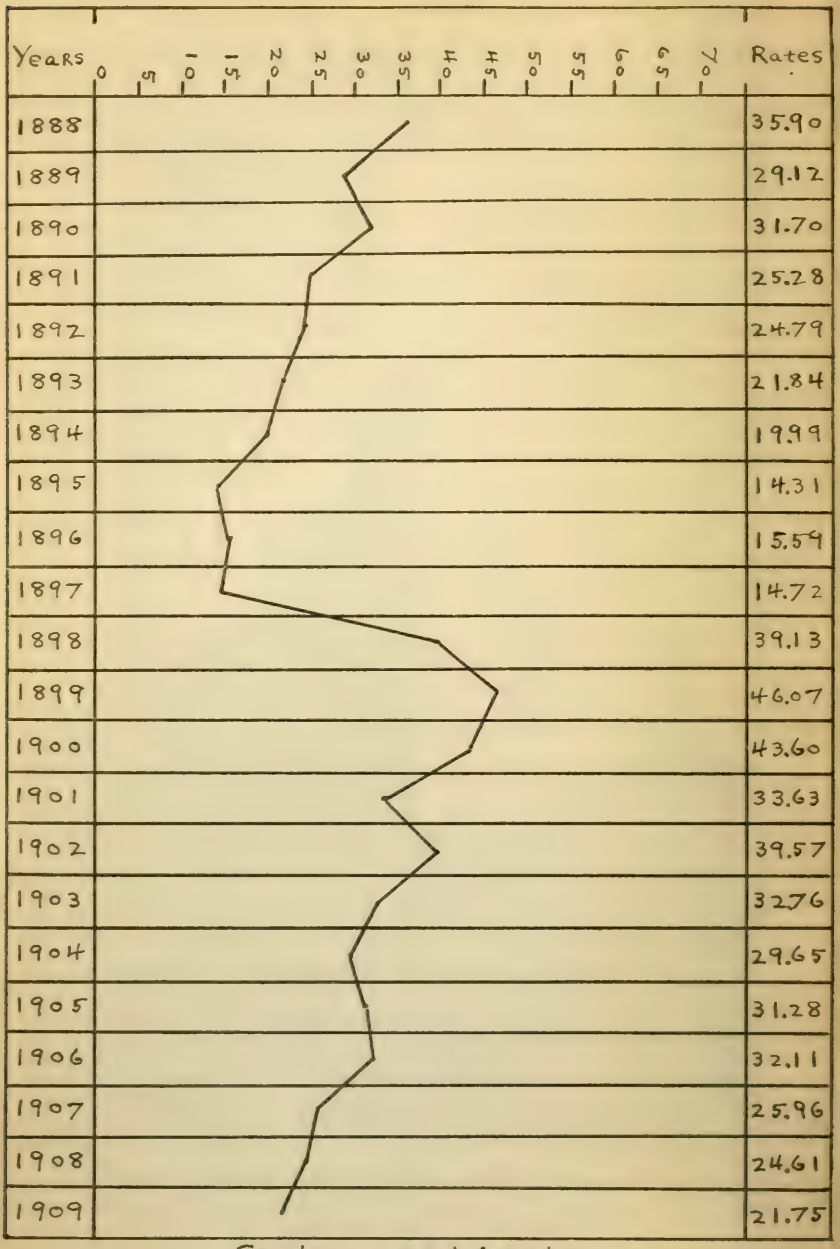


CHART D.—*Showing the total noneffective rate for disease, by years, since 1888, for the army.*

CHART E.—*Showing for the army the rates for total losses, all causes, by years, since 1888.*



Scale 20 to 1 inch.

CHART F.—*Showing for the army the death rates for the three diseases having the highest rates in 1909.*

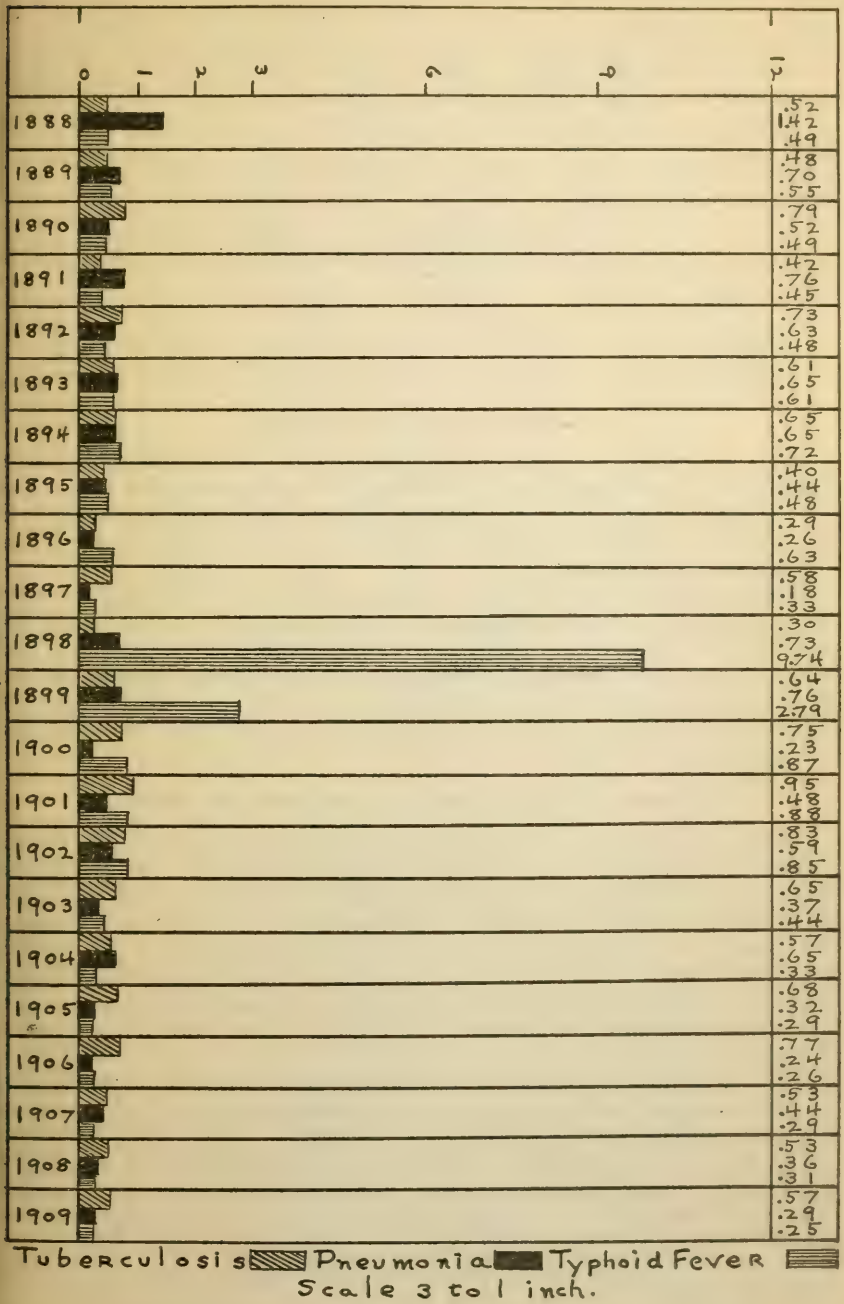


TABLE NO. 4.—*Venereal diseases—Admissions and discharges, Army, 1909.*

(Mean strength, 74,319.)

	Syphilis.		Chancroids.		Gonorrhea.		Total.	
	Admissions.	Discharges.	Admissions.	Discharges.	Admissions.	Discharges.	Admissions.	Discharges.
United States	1,534	121	1,447	.....	7,156	84	10,137	205
Alaska	7	.....	7	.....	43	.....	57	.....
Cuba	14	.....	27	.....	82	.....	123	.....
Hawaii	60	1	26	.....	143	.....	229	1
Philippines	592	.....	733	.....	2,552	.....	3,877	.....
Transports	56	.....	47	.....	114	.....	217	.....
Total	2,263	122	2,287	.....	10,090	84	14,640	206
Ratios per 1,000 of mean strength	30.45	1.62	30.77	.....	135.77	1.11	196.99	2.73

Days	354,508
Constantly sick	971.25
Ratio per 1,000	13.05

TUBERCULOSIS AND MALARIA.

The admission rate for tuberculosis, 4.70, is somewhat greater than for the preceding year, but closely approximates the mean rate for the last decade, 4.65. A general discussion of this question will be found in connection with the occurrence of tuberculosis in the United States, page 54.

The decrease in prevalence of malarial infection has been steadily maintained since the knowledge of its method of transmission made possible the intelligent application of preventive measures. This is well shown by Chart Q, on page 52, for the United States proper. The admission rate for the whole army in 1909 was 38.42, that for the preceding year being 46.33, and the mean rate for the past decade 242.60.

DISCHARGES—INFLUENCE OF STATIONS ON TROOPS.

All discharges are now made in the United States, except for the Porto Rican regiment and the Philippine Scouts, but the discharges and deaths occurring in the United States of soldiers invalided home from foreign service and whose organizations were serving abroad at the time have been credited to the country from which the soldier was invalided. There remains, however, a considerable number of deaths and discharges which can only be assigned to the place where they occur, though the diseases which led to these terminations were contracted abroad.

Regarding the comparative healthfulness of various countries in which the American troops were serving during the year (not including Cuba), it will be noted in Table No. 3, page 15, that Alaska had, as usual, the lowest admission, discharge, death, and noneffective rates; the United States, continental, the second lowest admission and noneffective rates and the highest discharge rate; the Philippines the second lowest discharge rate and the highest admission and death rates; and Hawaii has the second lowest death rate and the highest noneffective rate.

The charts on pages 24 and 25 give a summary of the health of the army, by countries in which it was stationed, during the year:

CHART G.—*Showing the relative admission and death ratios per thousand of mean strength for tuberculosis in the army, by years, since 1897.*

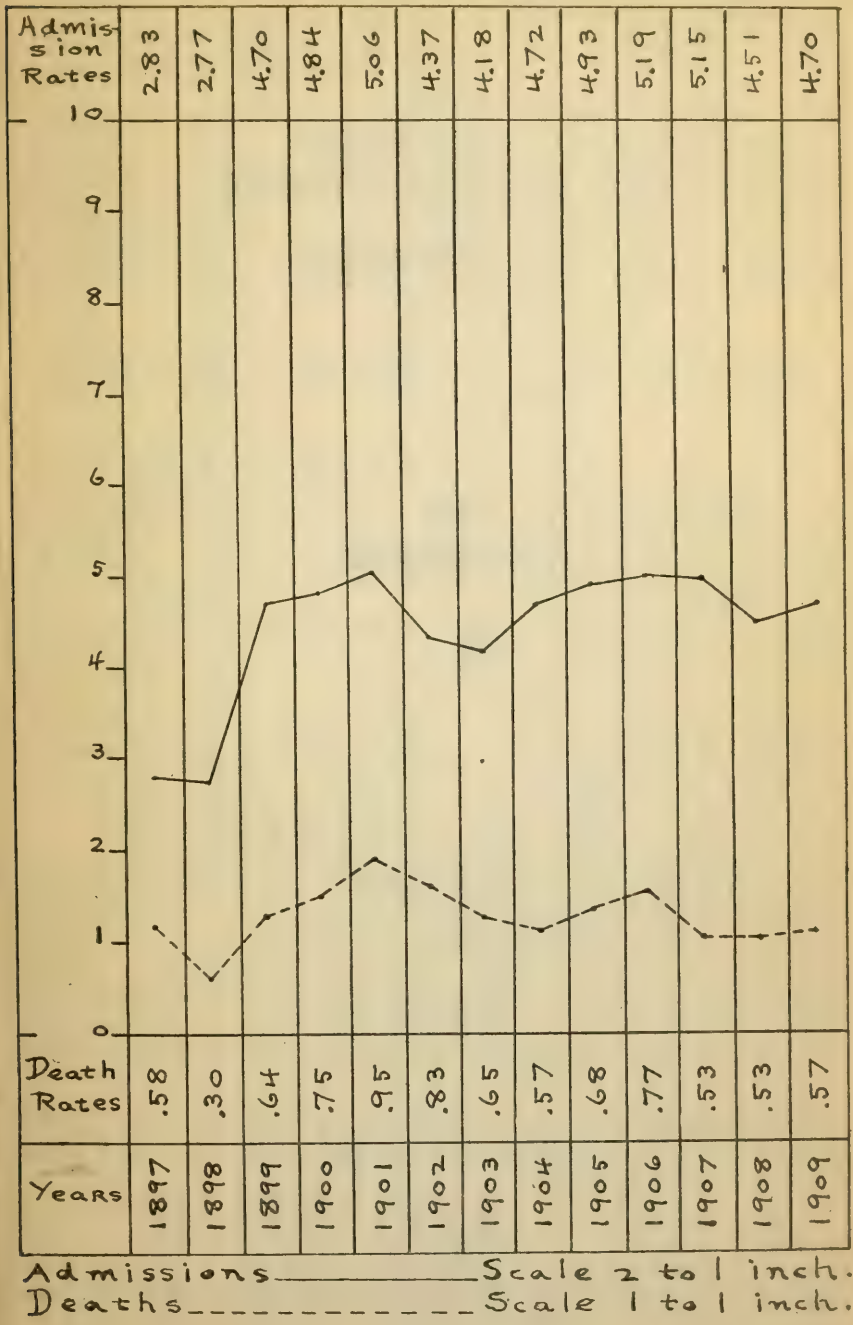
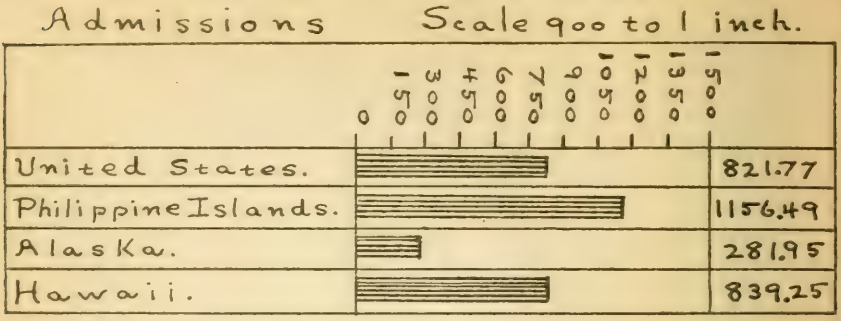
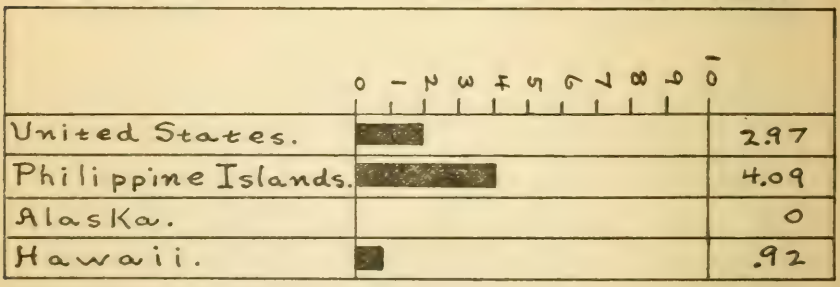
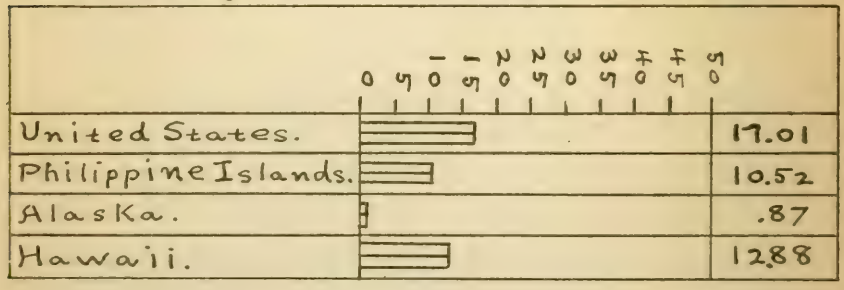


CHART H.—*Showing the relative admission, death, discharge, and noneffective rates per thousand of mean strength for disease, by countries.*







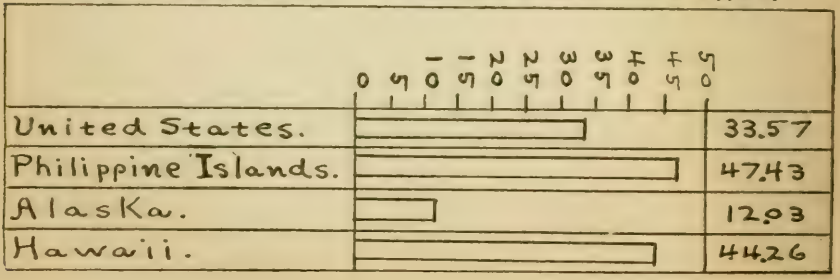
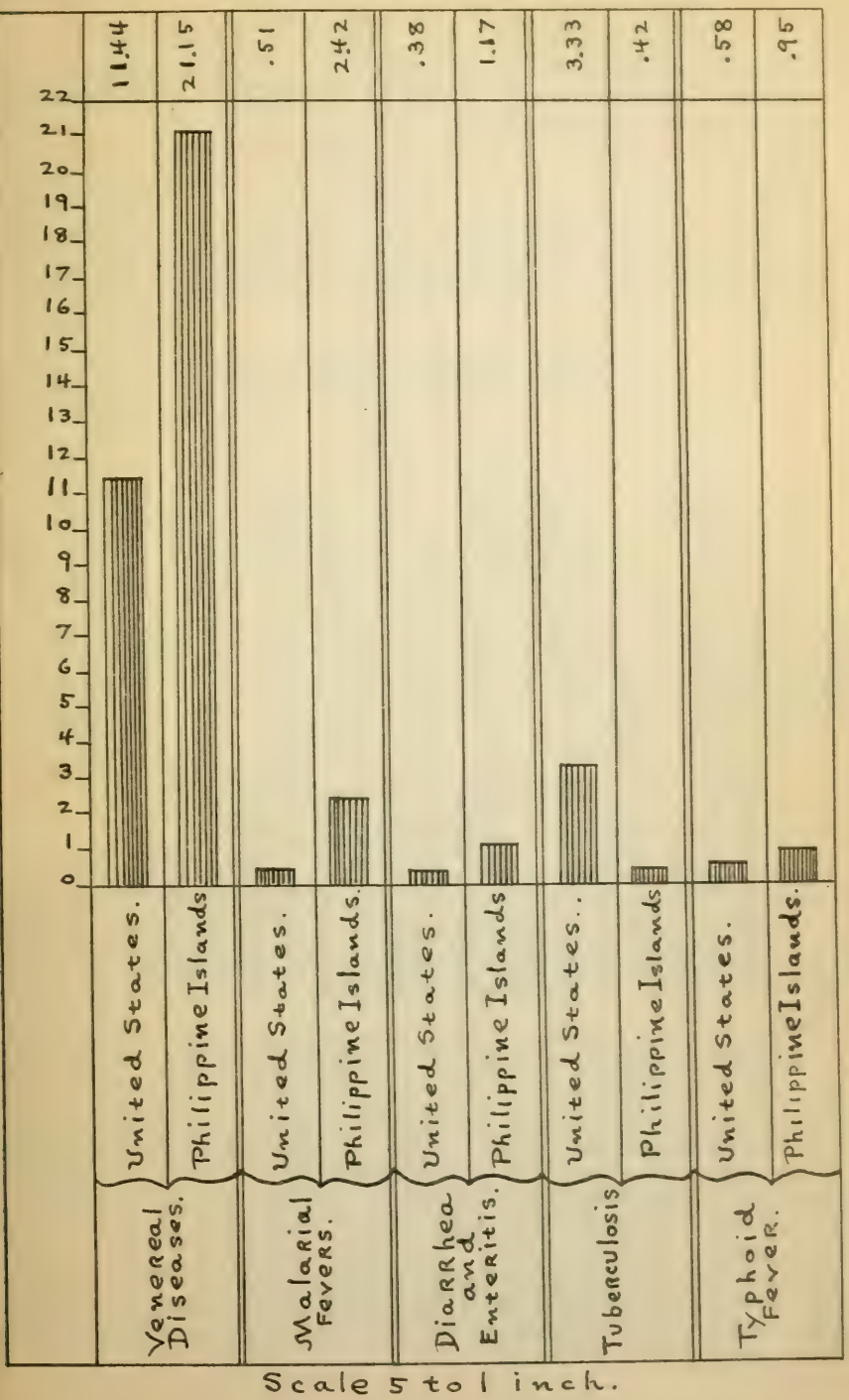


CHART I.—*Showing the relative noneffective ratios per thousand of mean strength of certain special diseases in the United States and the Philippine Islands.*



INFLUENCE OF ARM OF SERVICE.

(See International Tables III and VII.)

In these comparisons the enlisted men of the Ordnance Department and Signal Corps are not considered on account of their small number and the special character of their service.

The admission rate was highest for the cavalry and lowest for the Hospital Corps; the death rate was highest in the Field Artillery and lowest in the cavalry.

The following table shows the relative frequency of the occurrence of the more important diseases for the various arms of the service, the figure 1 indicating the highest ratio and 6 the lowest in each case for each arm:

TABLE No. 5.—*The relative frequency of occurrence of certain important diseases by arms of service, United States Army, year 1909.*

Arms of service.	Most important diseases.											
	Venereal.	Tonsilitis and pharyngitis.	Diarrhea and enteritis.	Malaria.	Bronchitis.	Alcoholism.	Rheumatism, articular.	Dysentery.	Tuberculosis.	Typhoid fever.	Pneumonia.	Injuries.
Cavalry	1	4	3	1	2	6	6	3	4	5	5	1
Field Artillery	3	1	5	2	5	5	1	5	5	1	6	3
Coast Artillery	4	2	4	6	1	1	5	6	6	6	4	2
Infantry	2	3	2	4	4	3	3	2	3	3	3	4
Engineers	5	6	1	3	6	4	2	1	2	2	1	5
Hospital Corps	6	5	6	5	3	2	4	4	1	4	2	6

INFLUENCE OF RACE.

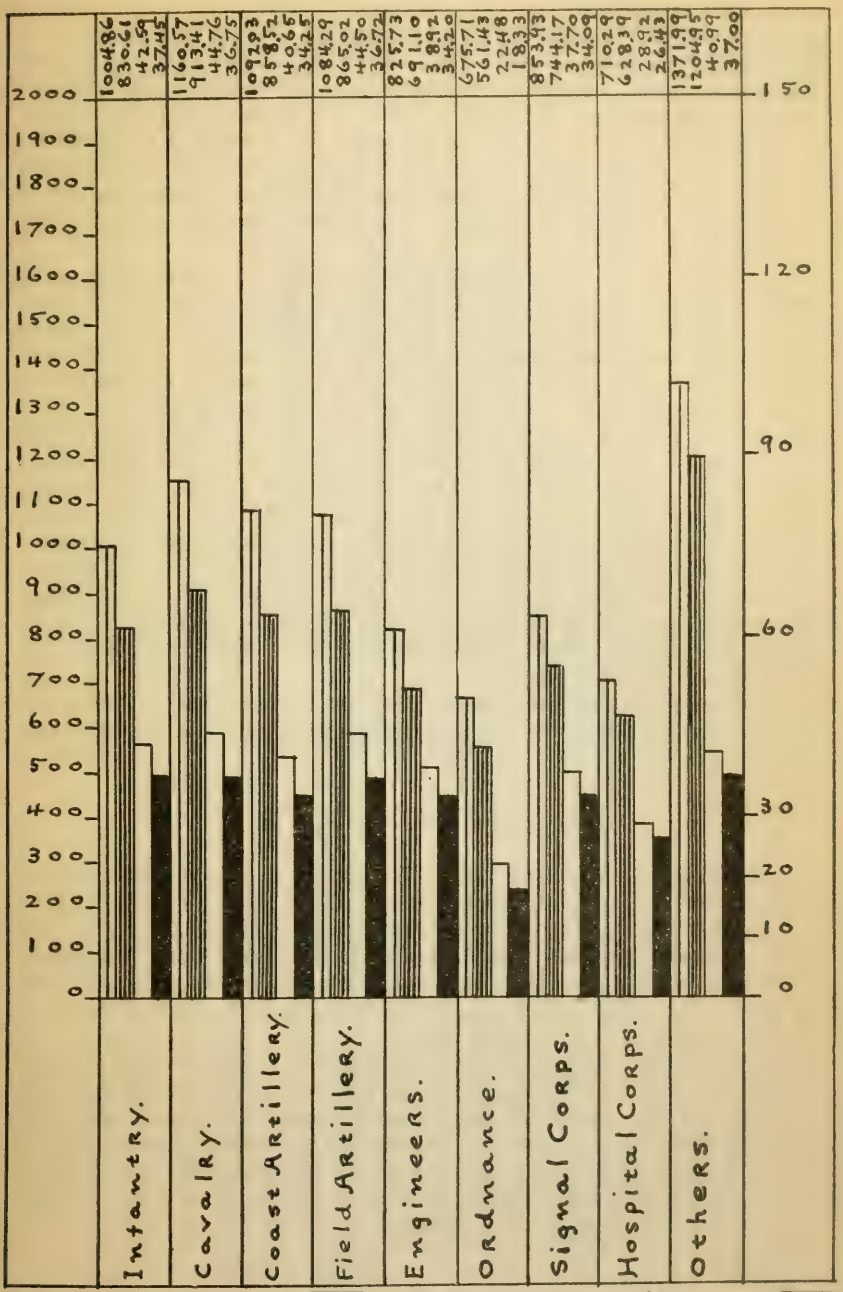
(See Tables 59, 62, and 66.)

These tables show that the white troops had the highest rate for admission to hospital, the colored troops for discharges on certificate of disability and for total losses; the Porto Rican troops for the number of days treated and for deaths. The death rate for white troops was 4.80, the Filipino was 7.40, the colored 7.29, and the Porto Ricans 12.35.

The admission rate for venereal diseases was one-third larger for the colored race than for the white, while for the Filipino it was less than one-fourth that for the white troops. Malarial fever was about the same for the white as for the colored, but the rate for this disease was much larger for the Filipino troops, an incidence which is explained in another place. Next to malarial fever, beriberi was the most prevalent disease among Filipino soldiers, with an admission rate of 103.93, while only two cases occurred among the white troops and one among the colored.

The incidence of tuberculosis was greatest for the Filipino, next for the colored, and lowest for the whites. For typhoid fever and dysentery the rates were highest for the whites, next for the colored, and lowest for the Filipino troops.

CHART J.—*Showing the relative admission and noneffective ratio per thousand of mean strength, by arms of service, for the army.*



COMPARISON WITH FOREIGN ARMIES.

An effort is made in Charts K, L, and M and Tables Nos. 67 and 68 to make a comparison of the data available in the annexes to the annual reports of the medical departments of the armies of a number of foreign governments. There are, however, so many factors which are peculiar to each country that an accurate comparison is impossible. For example, in most foreign services many of the minor ailments, which in the United States Army are treated in quarters and recorded with the same accuracy and care as in hospital cases, are not made of record in the medical reports.

These tables show that the admission rates for alcoholism and venereal diseases taken together are much higher in the United States Army than in any foreign army included in the tables. This is also true of venereal diseases with the exception of syphilis, for which the admission rate is 35.1 in the British army, as compared with 26.85 in our army. For malaria, the admission rate as compared with the United States is higher in the British, Russian, Japanese, and Spanish, and much lower in the French, Prussian, Bavarian, Austrian, and Belgian. Typhoid fever is higher in the British, French, Russian, and more than twice as high in the Japanese. Pneumonia, lobar, is higher in the Bavarian, Prussian, Austrian, Russian, Japanese, Dutch, French, and English. Pulmonary tuberculosis is higher in the Spanish, French, Japanese, and Dutch. Diseases of the heart are higher in Spanish, Austrian, Belgian, Russian, British, French, and Prussian. For mental diseases our rate is the highest, being 2.04 for colored and 1.62 for white troops.

It will be noticed that in these tables the figures for the American troops are for the year 1909, for the British 1908, for the Dutch 1905, and for all others 1907.

SURGICAL OPERATIONS.

On page 170 will be found Table No. 58 of the principal surgical operations performed by medical officers upon officers and enlisted men; operations upon families of officers and enlisted men who are entitled to treatment at army posts are not included. In 3,933 operations there were only 23 failures, with 30 deaths. The anaesthetic used was ether 1,326 cases, chloroform 335, chloroform and ether 100, local 1,873, and none 299.

One hundred and seventy-six operations were performed for appendicitis, with 4 deaths; 174 operations for inguinal hernia, with 1 death; 6 for ventral, 1 for umbilical, and 3 for femoral, with no deaths; 10 exploratory laparotomies, with 2 deaths; 22 operations for abscess of the liver, with 5 deaths; 15 operations on the gall bladder, with 1 death; 16 operations for empyema, with 3 deaths, and 3 operations for peritonitis, purulent, with 1 death.

CHART K.—*Showing a comparison with foreign armies of the relative total loss, death, and discharge ratios per thousand of mean strength.*

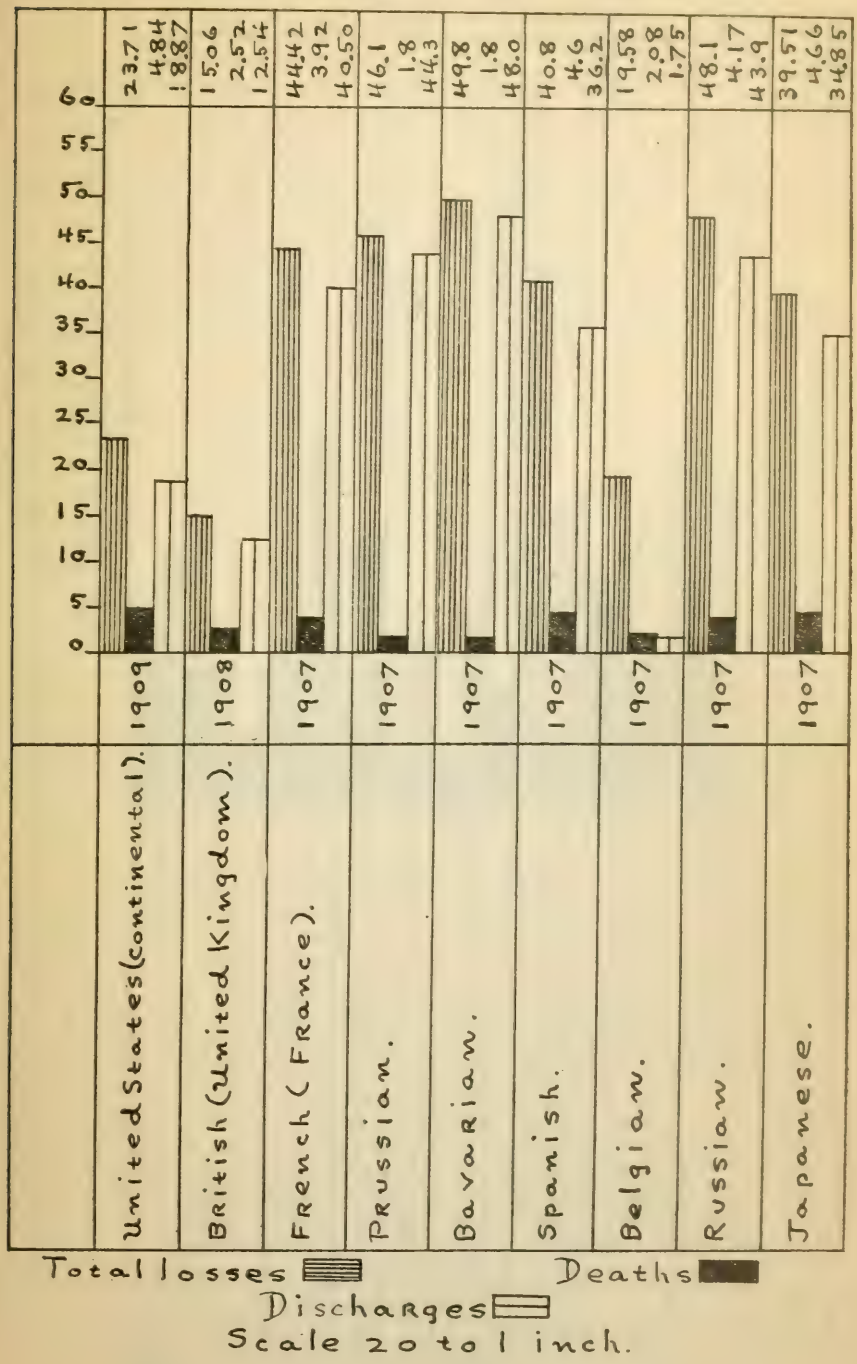


CHART L.—*Showing a comparison with foreign armies of the relative admission and death ratios per thousand of mean strength.*

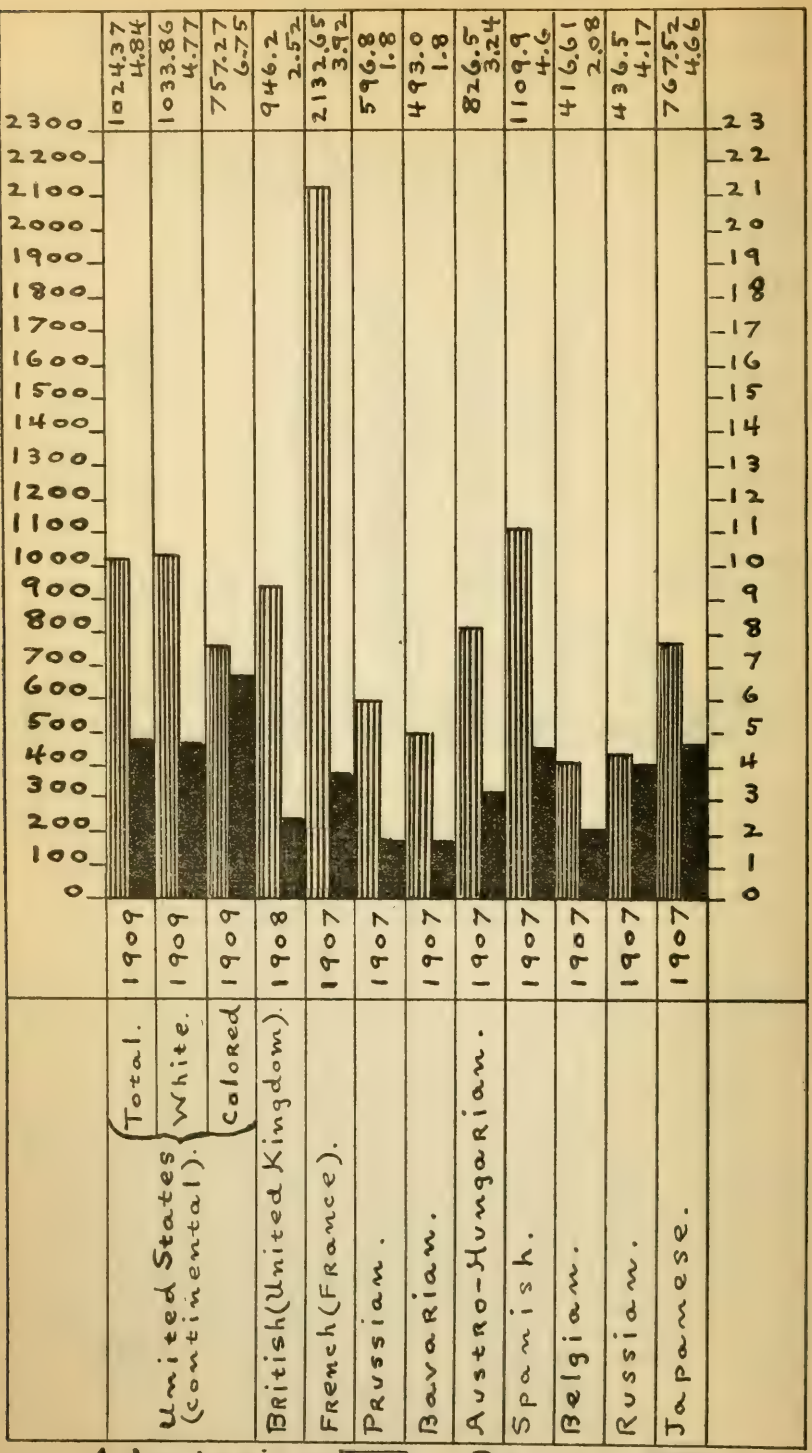
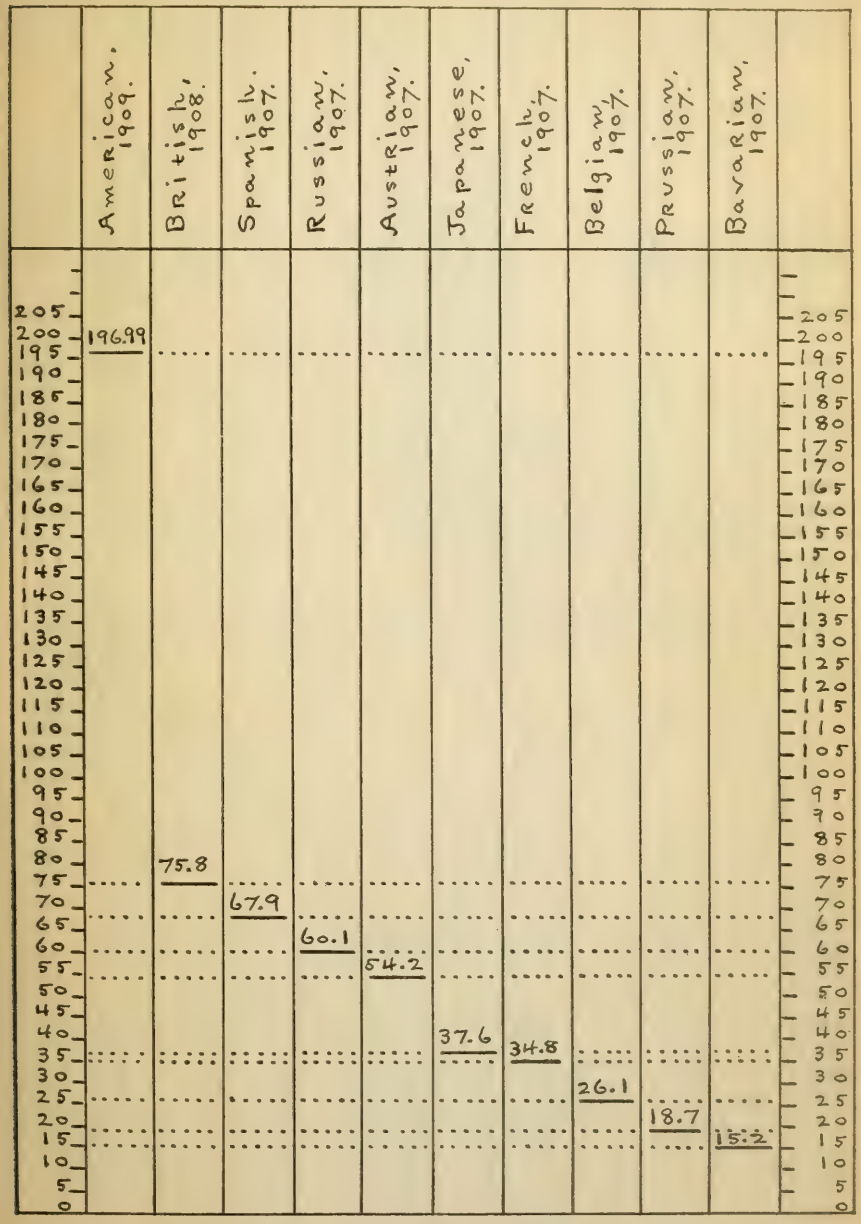


CHART M.—*Showing a comparison with foreign armies of the relative admission ratios per thousand of mean strength for venereal diseases.*



RECRUITING.

The movement of recruits is shown in Table No. 6. Each recruit was given a thorough physical examination by a medical officer of the army. On account of the reduction in the size of the army for 1910 the number of recruits examined by medical officers during the year 1909 was 23,520, as compared with 54,885 for the preceding year.

TABLE NO. 6.—*Movement of recruits, white and colored.*

	White.		Colored.		Total.	
	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.
Examined by medical officers	22,613	1,000.00	907	1,000.00	23,520	1,000.00
Accepted by medical officers	18,811	831.87	774	853.36	19,585	832.69
By first enlistment	10,719	474.02	313	345.09	11,032	469.04
By all other enlistments	8,092	357.85	461	508.27	8,553	363.65
Rejected by medical officers	[a] 3,243	143.41	[a] 113	124.59	[a] 3,356	142.69
Declined	559	24.72	20	22.05	579	24.62

[a] Of this number 275 (265 white and 10 colored) were rejected for causes not physical.

This table shows only the applicants who had previously passed the scrutiny of the recruiting officers, and who were therefore picked men. The number of examinations and of rejections by recruiting officers is not known to this office, but was, of course, much larger. The present recruiting system operates in a highly satisfactory manner and furnishes to the army recruits of excellent quality.

Table No. 7 shows the nativity of accepted recruits for the year:

TABLE NO. 7.—*Nativities of accepted recruits, American Army, 1909.*

Country of birth.	Accepted recruits, year 1909.	
	Number.	Ratios per 1,000 of total accepted.
United States:		
White	16,060	820.02
Colored	774	39.52
Total native born	16,834	859.54
Germany	623	31.81
Ireland	478	24.41
Russia	302	15.42
Austria	263	13.43
England	236	12.05
Canada	182	9.29
Scandinavia	173	8.83
Hungary	95	4.85
Italy	86	4.39
Denmark	58	2.96
Switzerland	50	2.55
Scotland	48	2.45
Holland	32	1.63
France	21	1.07
Others	104	5.31
Total foreign born	2,751	140.46
Grand total	19,585	1,000.00

The number of foreign-born recruits is less than last year, the ratio being 140.46, as compared with 149.09 for 1908. There was a decrease in the proportion of recruits from Ireland, Russia, Roumania, and Hungary, and an increase of about 3 per cent from Germany.

The following tables have been carefully compiled and are of interest, as they show the state of physical development of the men admitted to the army during the year.

The ages of all the recruits accepted, white and colored, and the proportion at each age per 1,000 are shown in this statement.

TABLE No. 8.—*Ages of recruits, white and colored, and the proportion at each age per 1,000 accepted.*

Age.	White.		Colored.		Total.	
	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.
18 years and under	1,109	58.95	23	29.72	1,132	57.80
19 years	703	37.37	15	19.38	718	36.66
20 years	458	24.35	13	16.80	471	24.05
21 years	3,669	195.05	85	109.82	3,754	191.68
22 years	1,730	91.97	47	60.72	1,777	90.74
23 years	1,120	59.54	37	47.80	1,157	59.08
24 years	1,617	85.96	67	86.56	1,684	85.98
25 years	1,183	62.89	52	67.18	1,235	63.06
26 years	933	49.60	48	62.01	981	50.09
27 years	923	49.07	37	47.80	960	49.02
28 years	735	39.07	37	47.80	772	39.42
29 years	705	37.48	40	51.68	745	38.04
30 years	580	30.83	45	58.14	625	31.92
31 years	413	21.96	31	40.05	444	22.67
32 years	433	23.02	30	38.76	463	23.64
33 years	374	19.88	20	25.84	394	20.12
34 years	272	14.46	23	29.72	295	15.06
35 years	209	11.11	12	15.50	221	11.28
36 years	184	9.78	15	19.38	199	10.16
37 years	192	10.21	19	24.55	211	10.77
38 years	185	9.83	15	19.38	200	10.21
39 years	162	8.61	11	14.21	173	8.83
40 years and over	922	49.01	52	67.18	974	49.73
Total	18,811	1,000.00	774	1,000.00	19,585	1,000.00

The proportion of accepted recruits under the age of 24 has noticeably diminished in comparison with last year, being due undoubtedly to the much larger proportion of reinlistments.

The series of tables which follow show separately for each race the heights of accepted recruits for the year and the proportion of each height per 1,000; also, in absolute and proportional numbers, the relation of height to age:

TABLE No. 9.—*Relation of height to age.*

ABSOLUTE NUMBERS—WHITE TROOPS.

Height.	Age.								
	18 years and under.	19 years.	20 years.	21 years.	22 years.	23 years.	24 years.	25 years.	26 years and over.	Total.
5 feet 1 inch and under	1								6	7
5 feet 2 inches				3	3		3		14	23
5 feet 3 inches	13	4	5	28	18	8	12	9	72	169
5 feet 4 inches	74	53	36	214	93	78	97	72	458	1,175
5 feet 5 inches	156	81	63	417	185	123	103	120	789	2,097
5 feet 6 inches	224	122	70	524	247	141	238	164	1,089	2,819
5 feet 7 inches	205	123	97	652	284	207	283	211	1,290	3,352
5 feet 8 inches	185	127	73	613	295	181	255	213	1,185	3,127
5 feet 9 inches	134	90	55	526	238	158	225	150	910	2,486
5 feet 10 inches	68	51	31	328	181	109	174	127	660	1,729
5 feet 11 inches	32	26	20	184	98	57	74	56	364	911
6 feet	13	19	4	125	65	34	59	37	262	618
6 feet 1 inch	3	5	1	32	16	14	22	16	75	184
6 feet 2 inches and over	1	2	3	23	7	10	12	8	48	114
Total	1,109	703	458	3,669	1,730	1,120	1,617	1,183	7,222	18,811

TABLE No. 9.—*Relation of height to age*—Continued.

PROPORTIONAL NUMBERS—WHITE TROOPS.

Height.	Age.									Total.
	18 years and under.	19 years.	20 years.	21 years.	22 years.	23 years.	24 years.	25 years.	26 years and over.	
5 feet 1 inch and under	0.90								0.83	0.37
5 feet 2 inches				0.82	1.73		1.86		1.94	1.22
5 feet 3 inches	11.72	5.69	10.92	7.63	10.40	7.14	7.42	7.61	9.97	8.98
5 feet 4 inches	66.73	75.39	78.60	58.33	53.76	69.64	59.99	60.86	63.42	62.46
5 feet 5 inches	140.67	115.22	137.55	113.65	106.94	109.82	100.80	101.44	109.25	111.48
5 feet 6 inches	201.98	173.54	152.84	142.82	142.77	125.89	147.19	138.63	150.79	149.86
5 feet 7 inches	184.85	174.96	211.79	177.71	164.16	184.82	175.02	178.36	178.62	178.19
5 feet 8 inches	166.82	180.65	159.39	167.08	170.52	161.60	157.70	180.05	164.08	166.23
5 feet 9 inches	120.83	128.02	120.09	143.36	137.57	141.07	139.15	126.80	126.00	132.16
5 feet 10 inches	61.32	72.55	67.69	89.40	104.62	97.32	107.61	107.35	91.39	91.91
5 feet 11 inches	28.85	36.98	43.67	50.15	56.65	50.89	45.76	47.34	50.40	48.43
6 feet	11.72	27.03	8.73	34.07	37.57	30.36	36.49	31.28	36.28	32.85
6 feet 1 inch	2.71	7.11	2.18	8.72	9.25	12.50	13.61	13.52	10.38	9.78
6 feet 2 inches and over	.90	2.84	6.55	6.27	4.05	8.93	7.42	6.76	6.65	6.06
Total	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00

TABLE No. 10.—*Relation of height to age.*

ABSOLUTE NUMBERS—COLORED TROOPS.

Height.	Age.									Total.
	18 years and under.	19 years.	20 years.	21 years.	22 years.	23 years.	24 years.	25 years.	26 years and over.	
5 feet 1 inch and under										
5 feet 2 inches										
5 feet 3 inches			1	1		1			4	7
5 feet 4 inches	3	2	1	7	3	3	5	3	29	56
5 feet 5 inches		2	1	10	11	6	9	4	57	100
5 feet 6 inches	10	1	3	15	11	7	12	10	51	120
5 feet 7 inches	5	4		17	4	11	8	9	81	139
5 feet 8 inches		4	5	15	9	3	12	9	73	130
5 feet 9 inches	3	2		11	4	3	11	8	71	113
5 feet 10 inches	2		1	4	2	1	5	5	33	53
5 feet 11 inches			1	2	3		3	2	25	36
6 feet				3			1	1	9	14
6 feet 1 inch							1		1	2
6 feet 2 inches and over						2		1	1	4
Total	23	15	13	85	47	37	67	52	435	774

PROPORTIONAL NUMBERS—COLORED TROOPS.

5 feet 1 inch and under										
5 feet 2 inches										
5 feet 3 inches			76.92	11.76		27.03			9.20	9.04
5 feet 4 inches	130.43	133.33	76.92	82.35	63.83	81.08	74.63	57.69	66.67	72.36
5 feet 5 inches		133.33	76.92	117.65	234.04	162.16	134.33	76.92	131.03	129.20
5 feet 6 inches	434.78	66.67	230.77	176.47	234.04	189.19	179.10	192.31	117.24	155.04
5 feet 7 inches	217.39	266.67		200.00	85.11	297.30	119.40	173.08	186.21	179.59
5 feet 8 inches		266.67	384.62	176.47	191.49	81.08	179.10	173.08	167.82	167.96
5 feet 9 inches	130.43	133.33		129.41	85.11	81.08	164.18	153.85	163.22	145.99
5 feet 10 inches	86.96		76.92	47.06	42.55	27.03	74.63	96.15	75.86	68.47
5 feet 11 inches			76.92	23.53	63.83		44.78	38.46	57.47	46.51
6 feet				35.29			14.93	19.23	20.69	18.09
6 feet 1 inch							14.93		2.30	2.58
6 feet 2 inches and over						54.05		19.23	2.30	5.17
Total	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00

It will be noted that 48.74 per cent of the white recruits were 5 feet 8 inches or over, and 1.06 per cent were under the minimum height of 5 feet 4 inches, as compared with 45.77 and 1.46 for the previous year.

For colored troops, 45.48 per cent were 5 feet 8 inches or over, and 0.09 per cent were under the minimum height, as compared with 44.18 and 1.46.

The average height for white recruits was 5 feet 7.6 inches; for colored, 5 feet 7 inches.

The following tables show separately for each race the weights of accepted recruits and the proportion of each weight per 1,000; also the relation of weight to age in both absolute and proportional numbers:

TABLE NO. 11.—*Relation of weight to age.*

ABSOLUTE NUMBERS—WHITE TROOPS.

Weight.	Age.									Total.
	18 years and under.	19 years.	20 years.	21 years.	22 years.	23 years.	24 years.	25 years.	26 years and over.	
119 pounds and under	27	14	6	26	14	9	16	13	118	243
120 to 124 pounds	164	62	53	257	95	58	59	51	258	1,057
125 to 129 pounds	210	136	71	395	149	94	126	87	502	1,770
130 to 134 pounds	211	116	77	536	221	134	184	131	683	2,293
135 to 139 pounds	192	122	73	552	262	150	198	156	845	2,550
140 to 144 pounds	98	84	59	541	270	177	260	179	892	2,560
145 to 149 pounds	103	73	41	478	220	140	191	158	873	2,277
150 to 154 pounds	46	45	30	342	194	94	175	119	702	1,747
155 to 159 pounds	25	25	19	208	109	97	134	91	592	1,300
160 to 164 pounds	15	13	11	143	76	56	95	79	425	913
165 to 169 pounds	8	4	5	85	46	36	80	37	357	658
170 to 174 pounds	7	2	11	48	27	31	41	34	253	454
175 to 179 pounds	1	2	1	24	24	21	20	21	214	328
180 pounds and over	2	5	1	34	23	23	38	27	508	661
Total	1,109	703	458	3,669	1,730	1,120	1,617	1,183	7,222	18,811

PROPORTIONAL NUMBERS—WHITE TROOPS.

119 pounds and under	24.35	19.91	13.10	7.09	8.09	8.04	9.89	10.99	16.34	12.92
120 to 124 pounds	147.88	88.19	115.72	70.04	54.91	51.79	36.49	43.11	35.72	56.19
125 to 129 pounds	189.37	193.46	155.02	107.66	86.13	83.93	77.92	73.54	69.51	94.09
130 to 134 pounds	190.26	165.01	168.12	146.09	127.75	119.64	113.79	110.74	94.57	121.90
135 to 139 pounds	173.12	173.54	159.39	150.45	151.45	133.93	122.45	131.87	117.00	135.56
140 to 144 pounds	88.37	119.49	128.82	147.45	156.07	158.04	160.79	151.31	123.51	136.09
145 to 149 pounds	92.88	103.84	89.52	130.28	127.17	125.00	118.12	133.56	120.88	121.05
150 to 154 pounds	41.48	64.01	65.50	93.21	112.14	83.93	108.23	100.59	97.21	92.87
155 to 159 pounds	22.54	35.56	41.48	56.69	63.01	86.61	82.87	76.92	81.97	69.11
160 to 164 pounds	13.53	18.49	24.02	38.98	43.93	50.00	58.76	66.78	58.85	48.54
165 to 169 pounds	7.21	5.69	10.92	23.17	26.59	32.14	49.47	31.28	49.43	34.98
170 to 174 pounds	6.31	2.84	24.02	13.08	15.61	27.68	25.36	28.74	35.03	24.13
175 to 179 pounds	.90	2.84	2.18	6.54	13.87	18.75	12.37	17.75	29.63	17.44
180 pounds and over	1.80	7.11	2.18	9.27	13.29	20.54	23.50	22.82	70.34	35.14
Total	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00

TABLE No. 12.—*Relation of weight to age.*

ABSOLUTE NUMBERS—COLORED TROOPS.

Weight.	Age.									Total.
	18 years and under.	19 years.	20 years.	21 years.	22 years.	23 years.	24 years.	25 years.	26 years and over.	
119 pounds and under				1				2	2	5
120 to 124 pounds	3	4		5		3	4	1	9	29
125 to 129 pounds	4		4	7	9	5	2	4	17	52
130 to 134 pounds	6	2	1	16	6	2	7	7	32	79
135 to 139 pounds	3	2	1	12	5	7	10	6	63	109
140 to 144 pounds	1	1	4	12	8	4	10	6	61	107
145 to 149 pounds	3	3	2	12	8	6	9	8	51	102
150 to 154 pounds	1	1	1	8	5	4	7	4	47	78
155 to 159 pounds		1		3	1	1	4	4	43	57
160 to 164 pounds	1	1		3	4	2	3	3	34	51
165 to 169 pounds				2	1		6	1	26	36
170 to 174 pounds	1			2		1		3	17	24
175 to 179 pounds							2	1	11	14
180 pounds and over				2		2	3	2	22	31
Total	23	15	13	85	47	37	67	52	435	774

PROPORTIONAL NUMBERS—COLORED TROOPS.

119 pounds and under				11.76				38.46	4.60	6.46
120 to 124 pounds	130.43	266.67		58.82		81.08	59.70	19.23	20.69	37.47
125 to 129 pounds	173.91		307.69	82.35	191.49	135.14	29.85	76.92	39.08	67.18
130 to 134 pounds	260.87	133.33	76.92	188.24	127.66	54.05	104.48	134.62	73.56	102.07
135 to 139 pounds	130.43	133.33	76.92	141.18	106.38	189.19	149.25	115.38	144.83	140.83
140 to 144 pounds	43.48	66.67	307.69	141.18	170.21	108.11	149.25	115.38	140.23	138.24
145 to 149 pounds	130.43	200.00	153.85	141.18	170.21	162.16	134.33	153.85	117.24	131.78
150 to 154 pounds	43.48	66.67	76.92	94.12	106.38	108.11	104.48	76.92	108.05	100.77
155 to 159 pounds		66.67		35.29	21.28	27.03	59.70	76.92	98.85	73.64
160 to 164 pounds	43.48	66.67		35.29	85.11	54.05	44.78	57.69	78.16	65.89
165 to 169 pounds				23.53	21.28		89.55	19.23	59.77	46.51
170 to 174 pounds	43.48			23.53		27.03		57.69	39.08	31.01
175 to 179 pounds							29.85	19.23	25.29	18.09
180 pounds and over				23.53		54.05	44.78	38.46	50.57	40.05
Total	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00

The average weight of white recruits was 144.8 pounds; of colored recruits, 147.2 pounds; the average weight of all recruits was 144.9.

Fifty-seven and ninety-four one-hundredths per cent of the white troops weighed 140 pounds or over, while 1.29 per cent weighed less than the minimum, 120 pounds, as compared with 54.21 and 2.04 per cent for the previous year. Sixty-four and sixty one-hundredths per cent of the colored troops weighed 140 pounds or over, and only 0.65 per cent less than 120 pounds, compared with 69.4 and 0.68 for 1908. These tables show that the colored recruits were heavier than the white recruits of the same age.

The next tables show separately for each race the chest measurement of accepted recruits and the proportion of each measurement per 1,000; also the chest measurement in relation to age in both absolute and proportional numbers:

TABLE No. 13.—*Relation of chest measurement to age.*

ABSOLUTE NUMBERS—WHITE TROOPS.

Chest measurement.	Age.									Total.
	18 years and under.	19 years.	20 years.	21 years.	22 years.	23 years.	24 years.	25 years.	26 years and over.	
30 inches and under.	80	39	26	131	28	20	22	24	108	478
31 inches	230	128	75	384	145	103	115	88	390	1,658
32 inches	336	192	110	815	374	211	286	199	973	3,496
33 inches	238	155	99	891	445	245	359	273	1,488	4,193
34 inches	141	101	79	675	377	219	363	273	1,468	3,696
35 inches	61	50	43	449	196	170	246	164	1,071	2,450
36 inches	19	28	18	221	97	83	130	92	730	1,418
37 inches	3	6	7	69	44	47	61	48	438	723
38 inches	.....	2	1	28	15	17	21	16	285	385
39 inches and over	1	2	.....	6	9	5	14	6	271	314
Total	1,109	703	458	3,669	1,730	1,120	1,617	1,183	7,222	18,811

PROPORTIONAL NUMBERS—WHITE TROOPS.

30 inches and under.	72.14	55.48	56.77	35.70	16.18	17.86	13.61	20.29	14.95	25.41
31 inches	207.39	182.08	163.76	104.66	83.82	91.96	71.12	74.39	54.00	88.14
32 inches	302.97	273.11	240.17	222.13	216.18	188.39	176.87	168.22	134.73	185.85
33 inches	214.61	220.51	216.16	242.85	257.23	218.75	222.02	230.77	206.04	222.90
34 inches	127.14	143.66	172.49	183.97	217.92	195.54	224.49	230.77	203.27	196.48
35 inches	55.00	71.12	93.89	122.38	113.30	151.79	152.13	138.63	148.30	130.24
36 inches	17.13	39.83	39.30	60.23	56.07	74.11	80.40	77.77	101.08	75.38
37 inches	2.71	8.53	15.28	18.81	25.43	41.96	37.73	40.57	60.65	38.43
38 inches	.....	2.84	2.18	7.63	8.67	15.18	12.99	13.52	39.46	20.47
39 inches and over	.90	2.84	.....	1.64	5.20	4.46	8.66	5.07	37.52	16.69
Total	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00

TABLE No. 14.—*Relation of chest measurement to age.*

ABSOLUTE NUMBERS—COLORED TROOPS.

Chest measurement.	Age.									Total.
	18 years and under.	19 years.	20 years.	21 years.	22 years.	23 years.	24 years.	25 years.	26 years and over.	
30 inches and under.	2	2	1	2	.....	.....	2	1	3	13
31 inches	4	2	3	6	6	3	2	5	25	56
32 inches	6	3	4	22	9	13	10	9	55	131
33 inches	5	3	3	23	10	6	13	12	85	160
34 inches	4	2	1	11	11	5	17	11	92	154
35 inches	.....	2	1	10	7	5	10	6	72	113
36 inches	2	.....	.....	6	4	3	11	3	55	84
37 inches	.....	.....	.....	4	.....	1	1	.....	24	30
38 inches	.....	1	.....	1	.....	.....	1	3	13	19
39 inches and over	.....	.....	.....	.....	.....	1	.....	2	11	14
Total	23	15	13	85	47	37	67	52	435	774

PROPORTIONAL NUMBERS—COLORED TROOPS.

30 inches and under.	86.96	133.33	76.92	23.53	.....	.....	29.85	19.23	6.90	16.80
31 inches	173.91	133.33	230.77	70.59	127.66	81.08	29.85	96.15	57.47	72.36
32 inches	260.87	200.00	307.69	258.82	191.49	351.35	149.25	173.08	126.44	169.25
33 inches	217.39	200.00	230.77	270.59	212.77	162.16	194.03	230.77	195.40	206.72
34 inches	173.91	133.33	76.92	129.41	234.04	135.14	253.73	211.54	211.49	198.97
35 inches	.....	133.33	76.92	117.65	148.94	135.14	149.25	115.38	165.52	145.99
36 inches	86.96	.....	.....	70.59	85.11	81.08	164.18	57.69	126.44	108.53
37 inches	.....	.....	.....	47.06	.....	27.03	14.93	.....	55.17	38.76
38 inches	.....	66.67	.....	11.76	.....	.....	14.93	57.69	29.89	24.55
39 inches and over	.....	.....	.....	.....	.....	27.03	.....	38.46	25.29	18.09
Total	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00

The chest measurement of 47.77 per cent of white recruits was 34 inches and over, and 2.54 per cent were 30 inches and under, compared with 45.74 and 3.41 per cent, respectively, for the previous year. The chest measurements for colored recruits show 53.49 per cent 34 inches or over and 1.68 per cent 30 inches and under, compared with 57.44 and 2.44 per cent, respectively, for 1908, the colored recruits showing to the advantage.

The following table shows the causes of rejection among white and colored candidates examined for enlistment during the year 1909, with ratios per 1,000 rejected:

TABLE No. 15.—*Causes of rejection of white and colored candidates examined for enlistment by medical officers of the army, 1909.*

Causes of rejection.	Total.		White.		Colored.	
	Number.	Ratios per 1,000 of all rejections for causes, physical and mental.	Number.	Ratios per 1,000 of all rejections for causes, physical and mental.	Number.	Ratios per 1,000 of all rejections for causes, physical and mental.
Venereal diseases	333	108.08	315	105.78	18	174.76
Heart disease	321	104.18	311	104.43	10	97.09
Diseases of the ear, including defects of hearing	291	94.44	285	95.70	6	58.25
Alcoholism	271	87.95	268	89.99	3	29.13
Diseases of the eye, including defects of vision	262	85.04	255	85.63	7	67.96
Flat feet	187	60.70	175	58.76	12	116.50
Under weight	127	41.22	126	42.31	1	9.71
Chest development insufficient	126	40.90	120	40.30	6	58.25
Defective teeth	122	39.60	113	37.94	9	87.38
Hernia	117	37.97	112	37.61	5	48.54
Injuries	107	34.73	105	35.26	2	19.42
Varicose veins, except as shown in detail	78	25.32	72	24.18	6	58.25
Diseases of the respiratory system	78	25.32	76	25.52	2	19.42
Defects of development, except as shown in detail	76	24.67	75	25.19	1	9.71
Tuberculosis	75	24.34	71	23.84	4	38.83
Curvature of the spine	64	20.77	64	21.49	.....	.....
Diseases of the skin	63	20.45	62	20.82	1	9.71
Varicocele	50	16.23	48	16.12	2	19.42
Hemorrhoids	49	15.90	48	16.12	1	9.71
Diseases of the genito-urinary system non-venereal	45	14.61	43	14.44	2	19.42
Diseases of the nervous system, except as shown in detail	36	11.68	36	12.09	.....	.....
Under height	35	11.36	34	11.42	1	9.71
Diseases of the digestive system, except as shown in detail	33	10.71	33	11.08	.....	.....
Weakness of mind	30	9.74	28	9.40	2	19.42
Physical debility	29	9.41	29	9.74	.....	.....
General diseases, except as shown in detail	28	9.09	28	9.40	.....	.....
Over weight and obesity	22	7.14	21	7.05	1	9.71
Diseases of the organs of locomotion, except spinal curvature	16	5.19	15	5.04	1	9.71
Diseases of the circulatory system, except as shown in detail	8	2.60	8	2.69	.....	.....
Over height	2	.65	2	.67	.....	.....
Rejected for causes physical and mental	3,081	918.06	2,978	918.29	103	911.50
Rejected for causes not physical or mental	275	81.94	265	81.71	10	88.50
Total	3,356	1,000.00	3,243	1,000.00	113	1,000.00

Venereal diseases caused the largest proportion of rejections, with heart disease second, and diseases of the ear, alcoholism, and diseases of the eye in the order given. Last year diseases of the eye (including

defects of vision) headed the list with a ratio per 1,000 of 108.01, followed by venereal diseases 106.66 second. In the colored race the ratios for venereal diseases and flat-feet were considerably greater than like causes or any causes in the white race.

Table No. 16 shows the principal occupations of 11,032 recruits enlisted during the year.

TABLE NO. 16.—*Occupations of soldiers, first enlisted, year 1909.*

Occupation.	Number in each class.			Occupation.	Number in each class.		
	Total.	White.	Colored.		Total.	White.	Colored.
Laborers	2,580	2,448	132	Mill workers	54	54	.....
Farmers	1,771	1,759	12	Tinners	52	51	1
Drivers and stablemen	711	699	12	Chauffeurs	47	44	3
Clerks	653	650	3	Boiler makers	43	43	.....
Carpenters	356	352	4	Linemen	43	43	.....
Machinists	335	335	.....	Mechanics	41	41	.....
Firemen	304	301	3	Motormen	38	38	.....
Miners	300	294	6	Druggists	34	34	.....
Painters	289	282	7	Glass workers	31	31	.....
Cooks	229	198	31	Lumbermen	31	31	.....
Musicians	199	193	6	Teachers	30	30	.....
Electricians	170	170	.....	Nurses	27	27	.....
Railroad hands	165	165	.....	Jewelers	27	27	.....
Plumbers	162	161	1	Leather workers	26	24	2
Metal workers	139	138	1	Packers	22	22	.....
Printers	137	135	2	Plasterers	22	18	4
Blacksmiths	129	127	2	Cigar makers	20	20	.....
Waiters	123	104	19	Paper workers	20	20	.....
Barbers	117	114	3	Stenographers	18	18	.....
Bakers	112	112	.....	Civil engineers	15	15	.....
Butchers	104	101	3	Merchants	14	14	.....
Tailors	102	97	5	Gardeners	14	13	1
Telegraphers	101	101	.....	Box makers	13	13	.....
Salesmen	99	99	.....	Conductors	13	13	.....
Engineers	94	94	.....	Florists	12	12	.....
Molders	77	76	1	Draftsmen	11	11	.....
Sailors	75	75	.....	Potters	10	10	.....
Shoemakers	73	73	.....	Photographers	10	10	.....
Porters	67	31	36	Miscellaneous others	298	286	12
Bookkeepers	56	56	.....				
Weavers	56	56	.....	Total	11,032	10,719	313
Students	56	55	1				
Brick and stone masons	55	55	.....				

DISCHARGES FOR DISABILITY.

Soldiers stationed outside the territorial limits of the United States are now brought to San Francisco for discharge, except those belonging to the Porto Rican regiment and the Philippine Scouts. They are, however, credited in the tabulated reports to the country in which the soldiers were serving when they became disabled. The progressive diminution in the discharge rate noted in my last report has continued, and has become more marked since the issue of General Order No. 174 of 1909, which requires that soldiers certified by medical officers to be permanently incapacitated for the military service shall be examined and observed by a board of three medical officers either at a recruit depot or a general hospital before being discharged. The reports of these boards are sent to the War Department and discharges for disability are now made only by authority of the Secretary of War. This order went into operation about the 1st of September, 1909, and as a result of it the discharges for the army during the last four months of the year averaged 59 per month, as compared with 128 per month for the preceding eight months.

UNITED STATES (CONTINENTAL) EXCLUSIVE OF ALASKA.

The average mean strength of the troops serving in the United States was 57,124, of which 55,163 were white and 1,961 were colored.

Deaths, as well as discharges of soldiers which occurred in the United States, they having been invalided home from their commands in foreign service, have been charged to the country where such commands are stationed. The admission, discharge, death, and noneffective rates were all lower for 1909 than for 1908. There has been a gradual decrease in these rates, excepting the death rate, for several years. The admission rates for 1909, 1908, 1907, and 1906 were, respectively, 1,024.37, 1,148.59, 1,172.04, and 1,179.93; for discharges, 18.87, 21.35, 25.36, and 32.29; for deaths, 4.84, 5.35, 5.63, and 5.28; for total noneffectiveness, 39.70, 41.19, 45.22, and 46.92. The highest admission, discharge, and constantly noneffective rates were for venereal diseases; and the highest death rate for tuberculosis.

TABLE NO. 17.—*Deaths among troops serving in the United States, continental (excluding Alaska), in 1909.*

Causes of death.	Number.	Ratios per 1,000 of—	
		Mean strength.	Total deaths.
Tuberculosis (lungs, 30; other organs, 7)	37	0.65	133.57
Pneumonia	20	.35	72.20
Typhoid fever	16	.28	57.76
Organic disease of the heart	18	.31	64.98
Measles	8	.14	28.88
Cerebrospinal fever	7	.12	25.27
Alcoholism (acute, 4; delirium tremens, 2; chronic, 1)	7	.12	25.27
Chronic nephritis	7	.12	25.27
Acute nephritis	4	.07	14.44
Abscess of the liver	4	.07	14.44
Diphtheria	3	.05	10.83
Broncho-pneumonia	3	.05	10.83
Pleuritis	3	.05	10.83
Aneurism	3	.05	10.83
Cirrhosis of the liver	3	.05	10.83
Erysipelas	2	.03	7.22
Septicemia	2	.03	7.22
Cerebral meningitis	2	.03	7.22
Cerebral congestion and hemorrhage	2	.03	7.22
Appendicitis	2	.03	7.22
Scarlet fever	1	.02	3.61
Influenza	1	.02	3.61
Leprosy	1	.02	3.61
Cancer	1	.02	3.61
Acute articular rheumatism	1	.02	3.61
Leukemia	1	.02	3.61
Pernicious anemia	1	.02	3.61
Spinal meningitis	1	.02	3.61
Insanity	1	.02	3.61
Cerebral tumor	1	.02	3.61
Embolus	1	.02	3.61
Purpura abdominalis, chronic (Henocks)	1	.02	3.61
Paralysis of heart due to obesity and overexertion	1	.02	3.61
Chronic emphysema	1	.02	3.61
Tonsillitis, acute	1	.02	3.61
Enteritis, hemorrhagic	1	.02	3.61
Acute peritonitis	1	.02	3.61
Total for disease	170	2.97	613.72
EXTERNAL CAUSES.			
Suicidal:			
By gunshot wounds (revolver, 12; rifle, 5; not stated, 4)	21	.37	75.81
By acute poisoning (carbolic acid, 2; oxalic acid, 1; unknown, 1)	4	.07	14.44
By incised wound (cutting his throat—character of weapon not stated)	1	.02	3.61
By hanging	1	.02	3.61
By inhalation of coal gas	1	.02	3.61
Total suicides	28	.49	101.08

TABLE No. 17.—*Deaths among troops serving in the United States, continental (excluding Alaska), in 1909*—Continued.

Causes of death.	Number.	Ratios per 1,000 of— Mean strength.	Total deaths.
Homicidal:			
By gunshot wounds (by sentry while attempting to escape, rifle, 3; revolver, 1; in brawl, revolver, 1; by comrade, rifle, 1; unknown, found dead, 1)	7	0.12	25.27
By blunt instrument (concussion of brain received while soldier was on pass, 1; by blow from poker in hands of comrade, 1)	2	.03	7.22
By fracture of skull (thrown from barracks window by comrade)	1	.02	3.61
By incised wound (cut by blade of pocket knife in brawl)	1	.02	3.61
By crushing (manner of traumatism unknown—received in drunken brawl)	1	.02	3.61
Total homicides	12	.21	43.32
Accidental:			
By drowning (while bathing, 9; circumstances unknown, 4; overturning of small boats, 5; falling into water, 4; breaking through ice while skating, 1)	23	.40	83.03
By falling (from horse, fracture of skull, 2; from moving train, fracture of pelvis and rupture of bladder, 1; fracture of skull, 1; while boxing, fracture of skull, 1; from street car, fracture of skull, 1; from railroad bridge, fracture of spine, 1; from porch, fracture of skull, 1; from window, fracture of spine, 1; from roof of building, fracture of skull, 1)	10	.17	36.10
By railroad cars (electric cars—struck by a car, fracture of skull, 1; fracture of spine, 1; both legs crushed, 1; steam cars—run over by cars, crushing, 1; cut in two, 1; injury not stated, 1. Struck by moving cars, fracture of skull, 1; fracture of spine, 1. Crushed in freight car, circumstances not known, 1)	9	.16	32.49
By gunshot wounds (explosion of siege gun while at target practice, 2; self-inflicted, circumstances not stated, rifle, 2; shot by comrades, rifle, 1; revolver, 1; circumstances and weapon unknown, 1)	7	.12	25.27
By acute poisoning (wood alcohol, 5; ptomaine poisoning, cause unknown, 1; nature of poison unknown, 1)	7	.12	25.27
By being struck by runaway horse (numerous injuries)	1	.02	3.61
By being thrown forward on pommel of saddle while riding a fractious horse, extensive traumatism of genito-urinary organs	1	.02	3.61
By laceration of jejunum by kick of mule	1	.02	3.61
By burns of trunk and upper extremities, explosion of powder	1	.02	3.61
Punctured wound penetrating chest and lacerating heart, inflicted by the metallic end of pike pole	1	.02	3.61
By being struck by automobile, fracture of skull	1	.02	3.61
By being buried under falling earth, fracture of spine	1	.02	3.61
By overturning of cart, fracture of skull	1	.02	3.61
By ether anesthesia	1	.02	3.61
Circumstances unknown, found dead, fracture of skull	2	.03	7.22
Total accidental	67	1.17	241.88
Total external causes	107	1.87	386.28
Total diseases	170	2.97	613.72
Grand total	277	4.84	1,000.00

The next higher rates for the United States were as follows:

Disease and ratio per 1,000.

Disease.	Admission.	Discharge.	Death.	Noneffective.
Tonsillitis	64.51			1.03
Bronchitis	36.55			
Influenza	34.87			
Tuberculosis		2.10		3.33
Insanity		1.38		
Organic heart disease		1.05	0.31	
Pneumonia			.35	
Typhoid fever			.28	
Rheumatism				1.02

The total number of deaths from all causes was 277, of which 170 were due to disease and 107 from external causes. Of the latter 67 were accidental, 28 were suicidal, and 12 were homicidal.

CHART X.—*Showing ratios per thousand of mean strength for discharges for disability, all causes, for ten years, since 1900, for the United States proper.*

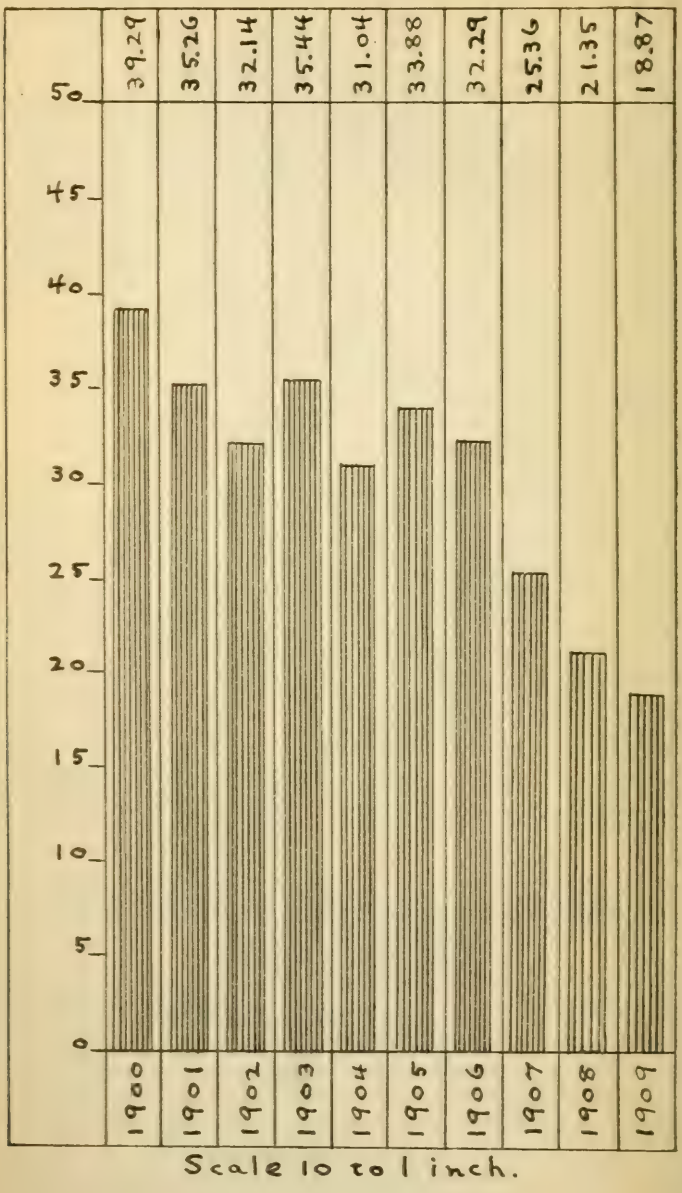
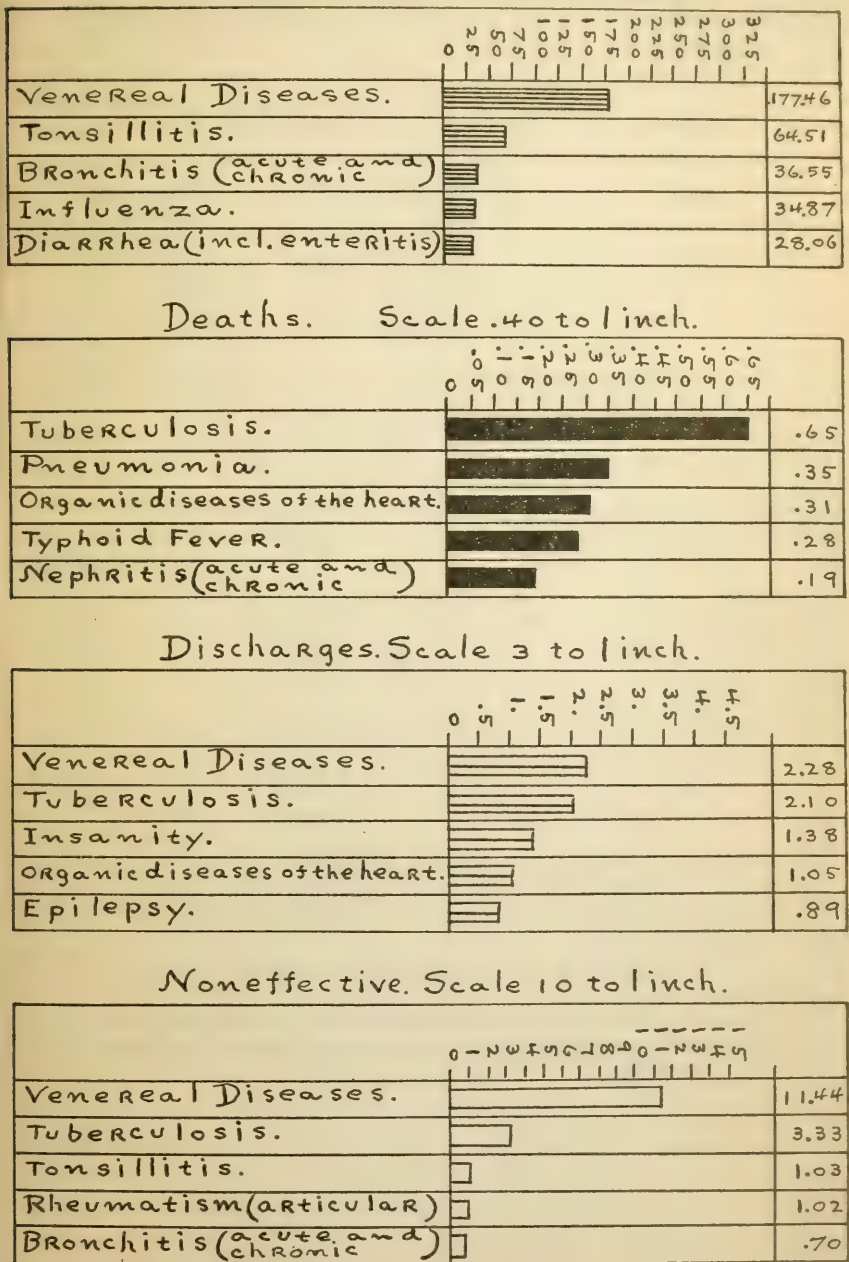


CHART O.—*Showing the relative admission, death, discharge, and noneffective ratios per thousand of mean strength for the five diseases causing the highest rates in the United States proper.*


Admissions. Scale 200 to 1 inch.
0 25 50 75 100 125 150 175 200 225 250 275 300 325
Venereal Diseases. 177.46
Tonsillitis. 64.51
Bronchitis (acute and chronic) 36.55
Influenza. 34.87
Diarrhea (incl. enteritis) 28.06
Deaths. Scale .40 to 1 inch.
0 .05 .10 .15 .20 .25 .30 .35 .40 .45 .50 .55 .60 .65
Tuberculosis. .65
Pneumonia. .35
Organic diseases of the heart. .31
Typhoid Fever. .28
Nephritis (acute and chronic) .19
Discharges. Scale 3 to 1 inch.
0 .5 1. 1.5 2. 2.5 3. 3.5 4. 4.5
Venereal Diseases. 2.28
Tuberculosis. 2.10
Insanity. 1.38
Organic diseases of the heart. 1.05
Epilepsy. .89
Noneffective. Scale 10 to 1 inch.
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
Venereal Diseases. 11.44
Tuberculosis. 3.33
Tonsillitis. 1.03
Rheumatism (articular) 1.02
Bronchitis (acute and chronic) .70

PREVALENCE OF SPECIAL DISEASES.

TYPHOID FEVER.

One hundred and seventy-three cases of typhoid fever occurred during the year in the army stationed within the geographical limits of the United States, with 16 deaths. Its distribution at the different posts was as follows:

TABLE No. 18.—*Typhoid fever at Military Stations, 1909.*

Station.	Admitted.	Days treated.	Constantly sick.	Died.	Remarks.
Fort D. A. Russell, Wyo	35	2,278	6.24	.....	30 cases in Co. F, 4th Field Artillery.
Fort Niagara, N. Y	18	825	2.26	1	5 cases in Co. I, 10 in Co. K, 12th Infantry.
Fort Sill, Okla	16	884	2.42	3	5 cases in Co. A, 7 in Co. B, 3 in Co. C, 1st Field Artillery.
Fort McPherson, Ga	10	1,018	2.79	1	7 cases in Co. E, 17th Infantry.
Fort Sam Houston, Tex	8	476	1.30	2	
Fort Leavenworth, Kans	7	272	.75	3	
Fort Monroe, Va	6	203	.56	.....	
Vancouver Barracks, Wash	[a] 6	375	1.03	.....	
Army and Navy General Hospital, Hot Springs, Ark.	5	248	.68	.....	
Presidio of San Francisco, Cal	4	4	.01	.....	
Washington Barracks (post), D. C	4	4	.01	.....	
Columbus Barracks, Ohio	3	202	.55	.....	
Fort Huachuca, Ariz	3	219	.60	.....	3 cases in Troop F, 8th Cavalry, infected on practice march.
Fort Snelling, Minn	3	467	1.28	1	
Field, Department of the Gulf	3	6	.02	.....	
Fort Sheridan, Ill	3	163	.45	2	
Fort Benjamin Harrison, Ind	2	268	.73	.....	
Fort Crook, Nebr	2	282	.77	.....	
Fort Des Moines, Iowa	2	217	.59	.....	
Fort Robinson, Nebr	2	282	.77	.....	
31 other stations, having 1 case each	[b] 31	2,144	.....	3	
Cases remaining from previous year	.....	1,323	.....	.....	
Total	173	12,160	33.32	16	

[a] Two cases paratyphoid fever. [b] One case paratyphoid fever.

The admission and death rates for this disease were 3.03 and 0.28, respectively, as compared with 2.94 and 0.23 for 1908. The case mortality was 9.2 per cent, this and the death rate being higher than for the two past years.

The ratio of incidence for white troops was 3.10 and for colored troops 1.02.

The following comparative table shows the most important variations in the occurrence of this disease for the present year as compared with 1908 and 1907:

Typhoid fever admissions at certain posts.

Post.	1909.	1908.	1907.
Fort D. A. Russell, Wyo	35	1	.....
Fort Niagara, N. Y	18	.....	.....
Fort Sill, Okla	16	2	.....
Fort McPherson, Ga	10	.....	.....
Fort Sam Houston, Tex	8	2	16
Fort Leavenworth, Kans	7	3	12
Fort Monroe, Va	6	6	4
Vancouver Barracks, Wash	6	.....	.....
Army and Navy General Hospital, Hot Springs, Ark	5	2	.....
Presidio of San Francisco, Cal	4	2	1
Washington Barracks, D. C	4	1	2
Columbus Barracks, Ohio	3	6	10
Fort Thomas, Ky	.....	2	7
Fort Slocum, N. Y	.....	1	6
Fort Walla Walla, Wash	.....	.....	5
Fort Oglethorpe, Ga	.....	.....	4
Fort Des Moines, Iowa	.....	10	3
Fort Robinson, Nebr	.....	5	2
Fort Wingate, N. Mex	.....	8	.....
Fort Riley, Kans	.....	5	.....

INVESTIGATION OF OUTBREAKS.

At Fort Sill, Okla., there was an outbreak with 20 cases and 4 deaths. The first 2 and last 2 cases seem to have no connection with the main group and must be regarded as sporadic.

There were 16 cases in the main group which appeared inside of eleven days, and 12 out of the 16 appeared within a period of six days. The remaining 4 cases appeared so quickly after the others that they must have been infected from the same source and at about the same time.

The epidemic was thoroughly investigated by Maj. Frederick F. Russell, curator, Army Medical School, assisted by Maj. Douglas F. Duval, post surgeon.

The conclusion arrived at as the result of the investigation was that the source of infection was probably ice cream manufactured at Lawton, Okla., and sold at the post exchange.

There was an extensive epidemic at Fort D. A. Russell, Wyo.; 35 cases occurred. Cases occurred in organizations as follows:

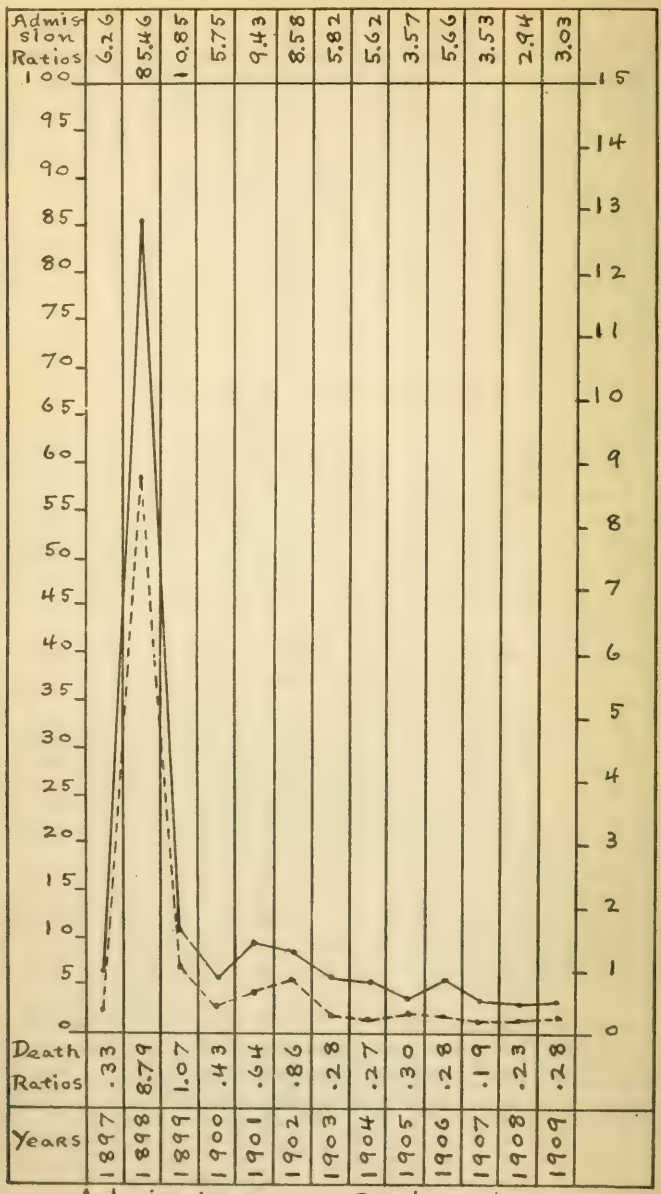
Battery F, Fourth Field Artillery	30
Battery D, Fourth Field Artillery	1
Battery E, Fourth Field Artillery	1
Battery A, Second Field Artillery	1
Battery B, Second Field Artillery	1
Battery C, Second Field Artillery	1

Intestinal hemorrhage occurred in 3 cases; post-typhoidal nephritis in 1 case; arthritis in 1 case; phlebitis in 1 case; cutaneous ulcers and general debility, 2 cases; mortality, none.

The dates on which the cases were admitted to hospital are as follows:

	Cases.		Cases.
Aug. 28	1	Oct. 21	4
30	1	22	5
Sept. 6	1	24	2
11	1	25	4
Oct. 11	1	26	2
14	2	29	1
17	1	Nov. 5	1
18	2	6	1
19	1	8	1
20	2	17	1

CHART P.—*Showing the admission and death ratios per thousand of mean strength for typhoid fever; by years, since 1897, for the United States proper.*



This epidemic was carefully investigated by Maj. P. M. Ashburn, Medical Corps, assisted by the medical officers at the post.

It will be seen from the above table that there were 4 cases admitted from August 28 to September 11, and then no more for an entire month. These 4 cases all developed outside the post, either at the maneuver camp at Pole Mountain, 30 miles away, or at Islay, a railway point where there was a tank and section house, and where stores for the camp were unloaded from trains and put into wagons. The command returned to the post September 11, and while no recognized case occurred for a month thereafter, there were many men sick who did not go to hospital, or were not admitted when they did go, at least 9 of those afterwards in hospital with typhoid being among the number. The fact that the men were not admitted to hospital is accounted for, in part at least, as follows: Fort D. A. Russell, until recently a regimental post, is now a brigade post. At the time in question the new hospital was not finished and the old hospital for the regimental post was still in use. Consequently, the hospital was very much crowded and the surgeons felt themselves under the necessity of treating in quarters most of the sick who seemed able to be out of bed.

In addition to the 9 cases later admitted for typhoid, there were subsequently found 7 other men of Battery F, Fourth Artillery, who were sick during the month from September 11 to October 11, and of these men 1 gave a positive Widal reaction in a dilution of 1 to 160 on November 5. These facts and the additional one that most of the typhoid patients in hospital had been sick from a few days to three weeks or more before their admission, strengthens the suggestion that there had been unrecognized cases in that month and that the epidemic was a continuation of the small camp epidemic. The case histories also indicate a way in which the infection might have been transmitted, as they showed that at least 5, and possibly 7, men were on duty as dining-room attendants, while actually sick with typhoid, for which they were later admitted to hospital, and that as dining-room attendants they had waited on the tables, handled and passed food and dishes, and had not scrubbed or paid especial attention to the condition of their hands.

Major Ashburn invites attention to the following points, the importance of which was emphasized by this epidemic, and a plea made for future care in regard to them:

1. The ordinary incubation period of typhoid fever is from a few days to three weeks, not six or eight weeks.
2. Typhoid may be contagious in its earliest stages, not merely during the height of the fever or in convalescence.
3. The kitchen should be the first place investigated during the occurrence of a company epidemic.
4. When a severe company epidemic prevails in a post the infected organization should be isolated and inspected by a medical officer daily or oftener.
5. All fever cases or other suspects should be sent to hospital and treated as typhoid until they prove to be something else.
6. In time of epidemic a "typhoid suspect" is a person who suffers from any signs or symptoms that may be indicative of typhoid, not the person with a well-marked case.
7. Fever in a man susceptible and who has been exposed to typhoid should be assumed, until proven otherwise, to be typhoidal, and not due to exercise in a high altitude or any such thing.

8. Sweeping in barracks should be done in such a way as to raise a minimum amount of dust.

9. Drinking should be from individual cups.

10. Company commanders, medical officers, and all others in authority should encourage men to go on sick report when they are sick, and this is especially important during the prevalence of an epidemic.

11. Sick men should at all times and by all means be kept from handling food stuffs, especially after such stuffs have had their final cooking, and more especially in the presence of an epidemic.

12. Kitchen and dining-room work should not be given by roster or as a punishment. It should carry rewards, immunities, or privileges sufficient to make it attractive and desirable and should be given only to the cleanest and best soldiers.

13. Every kitchen, dining room, and toilet room should be well provided with soap and abundant and good nail brushes, and men should be taught to scrub their hands and clean their nails before handling even their own food, and to scrub and clean them with especial care before handling their comrades' food.

14. In camp and garrison the work of sanitary inspection should be done by experienced medical officers, not by those new to the service. The latter are probably as well equipped for treating the sick as they ever will be, while they may have all to learn as regards military hygiene and sanitary inspection.

At Fort McPherson, Ga., 7 cases occurred in Company E, Seventeenth Infantry, between June 17 and July 1, 1909. This was probably a company infection. The post surgeon, Maj. David Baker, has the following to say in regard to the measures taken to stamp out the epidemic:

> Every case was promptly isolated. The nurses were isolated and every precaution taken to prevent escape of infection from the ward by dishes, clothing, flies, excreta, etc. In Company E twice a day temperature were taken of all men for three weeks after the last case was admitted from that organization. All personal effects of patients and their equipment were disinfected. In Company E a general disinfection was made. I have fairly excluded contact in this garrison. The water supply is excellent, the milk supply inspected and not suspected, and bacillus carriers excluded in the cooks of Company E.

Six other cases were admitted to this hospital, but of these 1 was from the attending surgeon's office in Atlanta, 2 from a field hospital, and 3 occurred in November, 1 each in Companies L, F, and N. These were probably sporadic.

The cases at other posts were sporadic, the infection either being contracted while on a practice march or from some neighboring city or town. At Columbus Barracks, Ohio, 2 of the 3 cases were recruits recently arrived, and 1 a man just returned from furlough. At Fort Huachuca, Ariz., the 3 cases occurring in Troop F, Eighth Cavalry, were probably infected while on practice march.

VACCINATION AGAINST TYPHOID FEVER.

Very considerable progress has been made during the year in the campaign for the protection of the army against this disease by means of vaccination with killed cultures of the *Bacillus typhosus*. This practice was introduced in March, 1909, and in the last annual report details were given of the vaccination of 830 individuals; since that date 10,941 persons have been vaccinated, making a total to date of 11,771, of whom completed record cards have been received.

The following table shows the distribution among organizations of those vaccinated:

OFFICERS.	
General Staff	7
Adjutant-General's Department	2
Inspector-General's Department	1
Quartermaster's Department	7
Subsistence Department	2
Medical Department	211
Pay Department	2
Corps of Engineers	7
Signal Corps	4
Cavalry	55
Field Artillery	23
Coast Artillery	74
Infantry	178
Porto Rico regiment of infantry	6
Retired officers	1
Total	580
Post quartermaster sergeants	12
Commissary sergeants	13
Hospital Corps	1,356
Engineer Corps	148
Ordnance sergeants	9
Signal Corps	298
Second Cavalry	1
Third Cavalry	23
Fourth Cavalry	269
Fifth Cavalry	85
Sixth Cavalry	1
Seventh Cavalry	395
Eighth Cavalry	189
Eleventh Cavalry	150
Twelfth Cavalry	1
Thirteenth Cavalry	1
Fourteenth Cavalry	14
Fifteenth Cavalry	40
Field Artillery Corps at Military Academy	1
First Field Artillery	318
Second Field Artillery	104
Third Field Artillery	89
Fifth Field Artillery	11
Sixth Field Artillery	294
Coast Artillery Corps:	
Bands	48
Noncommissioned staff	39
Recruits	1
Coast Artillery Companies	2,928
First Infantry	300
Second Infantry	32
Fifth Infantry	235
Sixth Infantry	16
Ninth Infantry	57
Tenth Infantry	174
Eleventh Infantry	2
Twelfth Infantry	27
Fourteenth Infantry	180
Fifteenth Infantry	14
Sixteenth Infantry	47
Seventeenth Infantry	45
Nineteenth Infantry	14
Twentieth Infantry	114
Twenty-first Infantry	37
Twenty-second Infantry	108
Twenty-fourth Infantry	388
Twenty-fifth Infantry	126
Twenty-sixth Infantry	730
Twenty-seventh Infantry	113
Twenty-eighth Infantry	65
Twenty-ninth Infantry	299
Porto Rico Regiment of Infantry	310
Recruiting parties, recruit depots, and unassigned recruits	383
United States military prison guard	53
Indian scouts:	
Fort Clark, Tex	16
Military convicts	8
Prisoners of war (Indians)	7
Detailed bakers and cooks	20
United States Navy:	
United States Navy	31
Naval station, Key West	90
Total	121
Militia:	
Mississippi National Guard	2
Officers Revenue-Cutter Service	1
Civilians	309

RECAPITULATION.

Officers		580
Enlisted:		
Quartermaster's Department	12	
Subsistence	13	
Hospital Corps	1,356	
Engineer Corps	148	
Ordnance	9	
Signal Corps	298	
Cavalry	1,169	
Field Artillery	817	
Coast Artillery Corps	3,016	
Infantry	3,123	
Porto Rican Infantry	310	
General service	383	
United States military prison guard	53	
Indian scouts	16	
Military convicts	8	
Indian prisoners of war	7	
Detailed bakers and cooks	20	
		10,758
Total in the army		11,338
United States Navy	121	
Revenue-Cutter Service	1	
Militia	2	
Civilians	309	
Total outside of army		433
Total number vaccinated		11,771

The total number of doses administered was 31,556. The practice of giving three doses to as many persons as possible has been continued and we find that 74.6 per cent received the full course of three; 21.5 per cent received two doses, and only 3.9 per cent failed to receive more than one. The failure to receive the second and third doses in the smallest group (3.9 per cent) has rarely been due to refusal, but usually to change of station, discharge, desertion, etc. No untoward results have been reported as a result of the administration of the vaccine.

The degree of severity of the general reaction following each dose has been tabulated and is shown in the following table:

Dose.	Absent.	Mild.	Moderate.	Severe.
	Per cent.	*Per cent.*	*Per cent.*	*Per cent.*
First	62.7	32.0	4.5	0.7
Second	68.6	25.8	5.0	.6
Third	79.0	16.7	4.1	.2

The number of moderate and severe reactions is quite small, and fully 95 per cent of the men have little or no reaction or discomfort, aside from a somewhat tender spot on the arm, which is rarely troublesome and disappears in twenty-four to forty-eight hours. The number of really severe reactions (0.5 per cent) is less than half that reported last year.

Among the 11,338 persons in the army who have been vaccinated there have developed to date three cases of typhoid with no deaths. In the first case there is no doubt but that the infection took place while the man was crossing the continent and before the vaccination was completed. The diagnosis was confirmed by the isolation of the bacilli from the feces. The other two cases were so mild that in the absence of blood cultures there remains some little doubt as to the correctness of the diagnosis. In this connection it is necessary to remember that the Widal reaction as a means of diagnosis among persons who have been vaccinated is worthless, since the reaction appears immediately after immunization and persists for a variable length of time; in some cases now under observation it is still present after a year and a half. Among such patients the only rational way of confirming a clinical diagnosis by laboratory methods is by using blood cultures.

The value of this measure is shown approximately by the following table:

	Number.	Cases.	Rate per thousand.
Unvaccinated	74,450	306	4.11
Vaccinated	11,338	3	.26

The actual strength of the army for 1909, including native troops, was 85,788, of whom 11,338 have been vaccinated, leaving a remainder of 74,450 unprotected. The number of typhoid cases includes all

those which have occurred in the entire army since the introduction of the practice of vaccination in March, 1909, up to June 30, 1910, and the figures for the number vaccinated cover the same period. It is more difficult to give accurately the number of the unvaccinated because of the changes in the personnel which are continually taking place, but it is believed that the rates given are fair and as accurate as can be obtained. The incidence among the unvaccinated is thus nearly sixteen times as high as among the vaccinated.

It is believed that the Medical Department has accomplished all that is practicable in the way of voluntary vaccination against typhoid fever and that the innocuousness of this procedure has been entirely demonstrated. Its protective value is now believed to be as perfectly demonstrated as any fact in medicine, and if it is desired by the War Department that the army have the benefit of this protection, the time has come to require it as a routine procedure throughout the army. Although no age is entirely exempt from typhoid fever, it is essentially a disease of adolescence. Individuals who have reached middle age have usually been exposed to the infection and are either immune because of a previous attack or because of natural immunity. Osler states that the period of greatest susceptibility is between the ages of 15 and 25. He shows that out of 1,500 cases treated at the Johns Hopkins Hospital there were 1,164, or nearly 78 per cent, under 30 years of age, and 335, or 22 per cent, were over that age, and in two cases the ages were not given. It is believed to be reasonable, therefore, to except from the universal vaccination of the army all persons over 35 years of age and all who give a reliable history of having had an attack of the disease. Surgeons should also be authorized to excuse any person for reasons of health, provided the exception is approved by the chief surgeon of the department. Recruits should of course be vaccinated immediately after enlistment but revaccinations upon reenlistment should not be required.

CEREBROSPINAL MENINGITIS.

Thirteen cases of this disease and 7 deaths occurred, which is exactly the number for 1908 and is a considerable reduction from the figures for 1907, when there were 33 cases and 30 deaths. Three cases occurred at Jefferson Barracks, where the appearance of the disease was mentioned in my last report. Two cases each occurred at Fort Baker, Cal., and Fort Assinniboine, Mont., and the remaining cases each at a separate post. In only two of the cases is there any evidence connecting them with antecedent cases.

MALARIA.

The occurrence of malarial fever, as shown by Chart Q continues to decrease. The admission rate for 1909 was 23.06, as compared with 26.69 for 1908 and 30.20 for 1907, which in its turn was the lowest on record in this office. This continuous improvement is to be credited not alone to the efforts of medical officers supported by commanding officers, but also to the liberal provision of wire gauze screens for doors and windows by the Quartermaster's Department.

CHART Q.—*Showing the relative admission and noneffective ratios per thousand of mean strength, for the decade 1900–1909, for malarial fevers in the United States proper.*

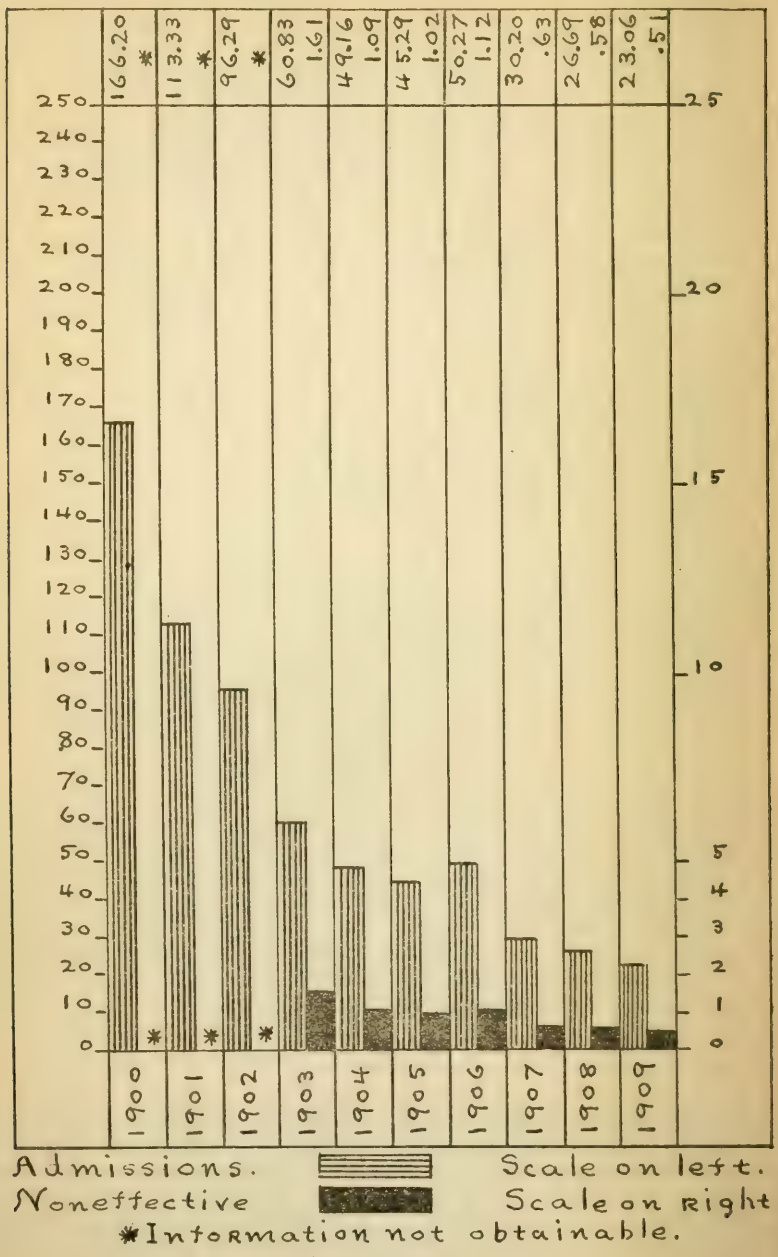


Table No. 19 shows the relative incidence of the various forms of malarial infection for the past five years.

TABLE NO. 19.—*Malarial infections, United States, continental, (excluding Alaska), year 1909.*

[Ratios per 1,000 of mean strength.]

Malarial fevers.	Admitted.			Discharged on surgeon's certificate of disability.			Died.			Noneffective.		
	Total.	White.	Colored.	Total.	White.	Colored.	Total.	White.	Colored.	Total.	White.	Colored.
Intermittent:												
1909	20.29	20.74	7.65	.....	.....	.....	.....	.....	.....	0.41	0.42	0.13
1908	24.12	24.33	11.05	.....	.....	.....	.....	.....	.....	.49	.49	.14
1907	28.44	29.28	.96	.....	.....	.....	.....	.....	.....	.53	.54	.02
1906	47.32	49.19	18.53	.....	.....	.....	.....	.....	.....	.93	.97	.39
Æstivo-autumnal:												
1909	1.96	1.99	1.02	.....	.....	.....	.....	.....	.....	.07	.07	.03
1908	2.09	2.11	1.38	.....	.....	.....	.....	.....	.....	.08	.08	.04
1907	1.51	1.55	.....	.....	.....	.....	.....	.....	.....	.08	.08	.....
1906	1.87	1.94	.80	.....	.....	.....	0.02	0.03	.....	.10	.11	.03
Malarial cachexia and undetermined malarial infections:												
1909	.80	.83	.....	0.02	0.02	.....	.....	.....	.....	.04	.04	.....
1908	.47	.48	.....	.....	.....	.....	.....	.....	.....	.01	.01	.....
1907	.26	.26	.....	.....	.....	.....	.....	.....	.....	.02	.02	.....
1906	1.08	1.07	1.21	.05	.05	.....	.....	.....	.....	.09	.08	.15
Total malarial diseases:												
1909	23.06	23.57	8.67	.02	.02	.....	.....	.....	.....	.51	.53	.16
1908	26.69	26.91	12.43	.....	.....	.....	.....	.....	.....	.58	.59	.18
1907	30.20	31.09	.96	.....	.....	.....	.....	.....	.....	.63	.65	.02
1906	50.27	52.20	20.56	.05	.05	.....	.02	.03	.....	1.12	1.16	.55

Table No. 20 shows the 10 posts having the highest admission rates for this disease.

TABLE NO. 20.—*The 10 posts in the United States having the highest admission rates for malarial diseases, year 1909.*

[Ratios per 1,000 of mean strength.]

	Mean strength.		Malarial diseases, total ratio.	
	1909.	1908.	1909.	1908.
Fort Washington, Md.	482	298	215.77	144.30
Jefferson Barracks, Mo.	1,052	900	137.83	152.22
West Point (Military Academy), N. Y.	668	668	110.78	76.35
Fort Barrancas, Fla.	609	470	87.03	72.34
Fort Logan H. Roots, Ark.	254	192	82.68	93.74
Fort Barry, Cal.	212	149	70.75	46.98
Fort Leavenworth, Kans.	2,305	2,388	66.81	57.79
Fort Morgan, Ala.	339	239	64.90	75.31
Fort Clark, Tex.	330	398	63.64	150.75
Fort Sill, Okla.	453	377	61.81	98.14
Total United States.	57,124	46,316	23.06	26.69

Fort Washington, Md., has a very high rate this year and stands first for malarial infection. It shows a marked increase in malarial infections over the preceding year, although less than for 1906 and 1907. The commanding officer in forwarding the sanitary report for May

states that dense undergrowth, almost tropical in character, exists near the barracks and along roads much used by the men, which if not removed will, it is feared, cause an increased prevalence of malaria this summer.

Jefferson Barracks stands second, the latter due probably to its being a recruiting station, which draws a large transient population from malarious districts.

West Point is in the third place, having failed to maintain the improvement shown in the preceding report.

UNDETERMINED FEVERS.

The admission rate for these fevers for the United States was 2.15, as compared with 3.80 for 1908, 4.67 for 1907, and 7.73 for 1906. The different diagnoses included under this heading and the number of admissions are given in the following table, which shows, also, their occurrence in the colonial possessions:

TABLE NO. 21.—*Undetermined fevers, 1909, American troops, by countries.*

Disease.	United States.	Alaska.	Cuba.	Hawaii.	Philippine Islands.	Transports.	Total army.
Febricula	59	.....	1	3	183	.....	246
Fever, simple continued	15	.....	.....	.....	103	2	120
Fever, type undetermined	36	1	3	.....	13	8	61
Ephemeral fever	5	.....	.....	1	23	1	30
Thermic fever	8	.....	.....	.....	5	.....	13
Total	123	1	4	4	327	11	470
Ratios, year 1909	2.15	.94	6.62	3.94	25.46	6.59	6.32

SMALLPOX.

Two cases of varioloid occurred during the year, both ending in recovery. One was at Fort Douglas, Utah, being an applicant for enlistment, who presented himself for examination in the eruptive stage. The other case occurred in a private, Twenty-fifth Infantry, at Fort George Wright, Wash.

YAWS.

A case of yaws was observed in a corporal, Tenth Cavalry, at Fort Ethan Allen. The treponema pertenue was found in the ulcers in abundance. This soldier had served in the Philippines, sailing for the United States May 15, 1909. The lesions were first observed July 2, 1909.

TUBERCULOSIS.

The admission rate for tuberculosis, 4.74, and the death rate, 0.65, are larger than last year, when they were 4.08 and 0.40, respectively. The discharge rate this year, 2.10, is less than for 1908, when it was 2.77. In 1907 the rate was 3.93. These rates are larger than in the majority of the foreign armies.

From Table No. 68 it will be seen that the occurrence of tuberculosis in our army at home is 4.74, which is higher than for all foreign armies except the Spanish, French, and Dutch, which have

rates of 5.92, 7.44, and 5.3, respectively. The death rate from this cause in the latter is lower than in ours, due to the fact that while many cases are retained for treatment in our army, they are much more freely discharged in foreign armies. Our death rate of 0.65 is exceeded by the French army with a rate of 0.76 and the Spanish army with 0.67 per 1,000.

It is of much importance to decide to what extent the tuberculosis occurring in the army is the result of infections received while in the service and what proportion of it is due to a recrudescence of old arrested foci which have escaped the scrutiny of the medical examiner at the time of enlistment. The company is the unit of commensal life and close personal contact in the army, and so we would expect to find a disease which is transmitted usually as a house infection manifesting itself by a series of small company epidemics.

In studying the 822 company organizations in the army with reference to this point we find as follows: No case in 577 companies, 1 case in 204 companies, 2 cases in 32 companies, 3 cases in 5 companies, 4 cases in 3 companies.

Upon examination of the dates of admission and disposition of the cases in the 40 companies which had more than one case, it is found that the interval between the departure of the case from the post and the admission of the next succeeding case exceeded three months 24 times in the 51 intervals noted. Also of the 27 companies which in 1908 had more than 1 case, we find that in 1909 15 had no case, 10 had only 1 case, and 2 had 2 cases. Of the 40 companies which in 1909 had more than 1 case, we find that in the preceding year 31 had no case, 5 had 1 case, 3 had 2 cases, and 1 had 3 cases.

It must be borne in mind that a portion of these companies had a change of station during the year, but estimating this number at one-third and making due allowance therefor, it seems evident that place infections must be quite a small factor in the production of tuberculosis in the army. In fact, a tuberculous soldier has small chance to infect his comrades, since as soon as he becomes sick he is promptly removed to hospital and as soon as a diagnosis of probable pulmonary tuberculosis is made he is transferred to the Hospital for Tuberculosis at Fort Bayard, N. Mex. In view of the abundant food and good clothing, and the large amount of exercise in the open air which the soldier enjoys, as well as the protection from infection due as above shown to the prompt elimination of those infected, it would seem that the chances of acquiring tuberculosis in the army would be small as compared with civil life. It is believed, therefore, that a large proportion of the cases developing in the army are recurrences of old and arrested infections acquired before enlistment, and that, as is the case with the venereal diseases, the hope of improvement in the army rests to a large extent upon the success of preventive work in the civil population from which it is recruited.

It must be always kept in mind that an abundant supply of pure air constitutes the best preventive as well as the best remedy for tuberculosis. The question of air space in barracks was discussed in last year's report and it was pointed out that in the construction of the barracks provision is made for an air space of 720 feet for each soldier, the height above 12 feet being disregarded. This allowance is not ample and should be regarded as sufficient only when the arrangements to secure ventilation are satisfactory and are maintained

in satisfactory operation. From sanitary reports received from time to time it seems that the supervision of the ventilation of barracks is sometimes neglected and that the air ducts are intentionally stopped up by soldiers who fear the fresh air. This is a matter of great importance which should be brought to the attention, not only of the medical officers, but of the company officers. All company officers and first sergeants should be instructed that when the squad-rooms have a close and disagreeable smell upon entering from the outer air it is a certain and reliable indication that the supply of fresh air is deficient, and the ventilating arrangements should be at once inspected and an increased supply of fresh air secured.

In this connection the following order issued by the commanding officer, Fort Wayne, Mich., upon the recommendation of the post surgeon, deserves attention:

Inspections of the company quarters during the past month show that they are not being properly ventilated, especially at night.

The commanding officer directs that company commanders give this matter their personal attention. Frequent inspections will be made by company commanders, at least two of which will be every month, near midnight.

To insure accurate use all ceiling ventilators in barracks and guardhouse will be supplied with ropes accurately labeled "open" or "shut."

Attention in this connection is invited to "barracks and quarters" and "floor space and ventilation," Chapter IV, Woodhull's Military Hygiene.

This order will be kept posted in company quarters, and report will be rendered at end of month of result of such inspections at night.

The recommendation made last year is renewed, that upon the doors of dormitories and squadrooms should be posted the number of men who can be properly accommodated in such rooms.

Table No. 22 shows the movement of cases and also the distribution of this disease by countries.

TABLE No. 22.—*Occurrence of tuberculosis among American troops, army, year 1909, by years of service.*

	During first year of service.	During second year of service.	During third year of service.	During fourth year of service.	During fifth year of service.	During sixth year of service and over.	Total.
United States, continental (excluding Alaska):							
Mean strength	15,654	13,879	5,910	4,298	3,541	13,842	57,124
Admitted	77	58	27	21	15	61	259
Ratio per 1,000 of mean strength	4.92	4.18	4.57	4.89	4.24	4.41	4.53
Duty	11	5	7	1	.....	6	30
Died	10	3	3	1	2	9	28
Discharged on surgeon's certificate of disability	21	9	3	4	3	7	47
Otherwise	2	.....	2	1	2	1	8
Remaining Dec. 31, 1909	33	41	12	14	8	38	146
Philippines:							
Mean strength	1,138	2,870	2,313	1,011	1,032	4,480	12,844
Admitted	15	12	5	6	6	21	65
Ratio per 1,000 of mean strength	13.18	4.18	2.16	5.94	5.81	4.69	5.06
Duty	1	3	.....	1	.....	2	7
Died	2	.....	.....	1	1	1	5
Discharged on surgeon's certificate of disability	1	1	1	2	2	1	8
Otherwise	.....	1	.....	1	.....	.....	2
Remaining Dec. 31, 1909	11	7	4	1	3	17	43
Cuba:							
Mean strength	206	151	68	34	22	123	604
Admitted	1	.....	.....	.....	.....	.....	1
Ratio per 1,000 of mean strength	4.85	.....	.....	.....	.....	.....	1.66
Discharged on surgeon's certificate of disability	1	.....	.....	.....	.....	.....	1

TABLE No. 22.—*Occurrence of tuberculosis among American troops, army, year 1909, by years of service*—Continued.

	During first year of service.	During second year of service.	During third year of service.	During fourth year of service.	During fifth year of service.	During sixth year of service and over.	Total.
Alaska:							
Mean strength	61	201	174	87	96	445	1,064
Admitted	.....	2	.....	1	.....	1	4
Ratio per 1,000 of mean strength	.....	9.95	.....	11.50	.....	2.25	3.76
Remaining Dec. 31, 1909	.....	2	.....	1	.....	1	4
Hawaii:							
Mean strength	141	296	250	48	67	212	1,014
Admitted	3	.....	.....	.....	.....	.....	3
Ratio per 1,000 of mean strength	21.28	.....	.....	.....	.....	.....	2.96
Duty	1	.....	.....	.....	.....	.....	1
Remaining Dec. 31, 1909	2	.....	.....	.....	.....	.....	2
Transports:							
Mean strength	164	359	318	124	133	571	1,669
Admitted	1	.....	.....	.....	.....	4	5
Ratio per 1,000 of mean strength	6.10	.....	.....	.....	.....	7.01	3.00
Remaining Dec. 31, 1909	1	.....	.....	.....	.....	4	5
Total army:							
Mean strength	17,364	17,756	9,033	5,602	4,891	19,673	74,319
Admitted	97	72	32	28	21	87	337
Ratio per 1,000 of mean strength	5.59	4.06	3.54	5.00	4.29	4.42	4.53
Duty	13	8	7	2	.....	8	38
Died	12	3	3	2	3	10	33
Discharged on surgeon's certificate of disability	23	10	4	6	5	8	56
Otherwise	2	1	2	2	2	1	10
Remaining Dec. 31, 1909	47	50	16	16	11	60	200

NOTE.—Of the 350 cases admitted in 1909, 13 were returned to duty and readmitted, leaving 337 individuals to be accounted for, giving a ratio of 4.53 per 1,000 of mean strength.

Table No. 23 shows the posts having more than one case for 1909 and also those for 1908 for purpose of comparison. Taken in connection with the data above given as to its occurrence in organizations it seems clear that prevalence of tuberculosis in a post as well as in a company one year does not to a marked extent influence its occurrence in the following year.

TABLE No. 23.—*Tuberculosis at army stations, United States, continental (excluding Alaska), year 1909.*

	Admissions year 1909.		Admissions year 1908.	
	Number.	Ratios per 1,000 of mean strength.	Number.	Ratios per 1,000 of mean strength.
Fort Leavenworth, Kans.	18	7.81	8	3.35
Fort Robinson, Nebr.	16	30.95	0	.....
Presidio of San Francisco, Cal.	14	5.73	3	1.50
Fort Monroe, Va.	13	10.49	5	5.61
Columbus Barracks, Ohio	9	8.10	5	5.42
General Hospital, San Francisco, Cal.	8	29.41	4	14.81
Fort Riley, Kans.	8	3.55	4	2.22
Fort Slocum, N. Y.	8	7.41	5	5.73
General Hospital, Fort Bayard, N. Mex.	7	55.56	4	32.00
Fort Benjamin Harrison, Ind.	7	8.08	5	18.80
Fort Sam Houston, Tex.	7	3.86	6	5.00
Fort Totten, N. Y.	7	9.42	3	5.10
Fort Walla Walla, Wash.	6	30.61	1	3.95
Fort Worden, Wash.	6	8.47	8	19.80
Fort Barrancas, Fla.	5	8.21	3	6.38

TABLE No. 23.—*Tuberculosis at army stations, United States, continental (excluding Alaska), year 1909*—Continued.

	Admissions year 1909.		Admissions year 1908.	
	Number.	Ratios per 1,000 of mean strength.	Number.	Ratios per 1,000 of mean strength.
Fort William Henry Harrison, Mont	5	17.24	1	4.00
Fort Douglas, Utah	4	5.28	7	10.19
Fort McPherson, Ga	4	5.72	1	5.15
Madison Barracks, N. Y	4	8.53	3	9.40
Presidio of Monterey, Cal	4	4.29	1	1.26
Fort Snelling, Minn	4	3.61	0	.....
Fort Baker, Cal	3	6.19	2	6.62
Fort Crook, Nebr	3	6.64	0	.....
Fort D. A. Russell, Wyo	3	1.54	2	3.28
Fort Du Pont, Del	3	6.40	0	.....
Fort George Wright, Wash	3	6.20	2	4.73
Fort Hamilton, N. Y	3	5.63	1	2.16
Fort Jay, N. Y	3	7.96	4	12.46
Jefferson Barracks, Mo	3	2.85	4	4.44
Fort Missoula, Mont	3	11.24	0	.....
Fort Niagara, N. Y	3	9.58	3	10.38
Plattsburg Barracks, N. Y	3	5.43	1	4.65
Fort Sheridan, Ill	3	3.18	2	3.00
Fort Sill, Okla	3	6.62	1	2.65
Vancouver Barracks, Wash	3	2.28	3	3.84
West Point, N. Y., Military Academy	3	4.49	1	1.50
Fort Williams, Me	3	6.70	0	.....
Fort Porter, N. Y	0	.....	6	29.27
Fort Adams, R. I	0	.....	5	10.66
Fort Thomas, Ky	0	.....	4	8.47
Fort Greble, R. I	0	.....	4	23.39
Fort Des Moines, Iowa	0	.....	4	6.24
Fort Moultrie, S. C	0	.....	4	8.55
Fort Logan H. Roots, Ark	0	.....	3	15.62
Fort Ontario, N. Y	0	.....	3	14.71
Fort Warren, Mass	0	.....	3	16.13
13 posts, not included above, had 2 cases each in 1909	26	.....	.....	.....
11 posts, not included above, had 2 cases each in 1908	.....	.....	22	.....
29 posts, not included above, had 1 case each in 1909	29	.....	.....	.....
24 posts, not included above, had 1 case each in 1908	.....	.....	24	.....
Field, not included above, 4 cases for 1909	4	.....	.....	.....
Camps of instruction and field, not included above, 4 cases for 1908	.....	.....	4	.....
Total for the year	271	.....	189	.....

INSANITY.

The admission rate for insanity for the United States was 1.63 per 1,000, as compared with 1.58 for 1908 and 1.79 for 1907.

ALCOHOLISM.

From 1898 to 1907 the number of admissions from this cause steadily increased, the ratio for the latter year being 36.09 per 1,000, but the figure for 1908 was 30.31, which showed a decided diminution, and for this year the ratio is 24.98, showing a still further decrease.

VENEREAL DISEASES.

The rates for the total venereal diseases for 1909 for the United States were: Admissions 177.46, discharges 3.28, and total noneffective 11.44, as compared with 174.84, 2.73, and 10.63, respectively, for 1908. These figures show an increase over last year, and the total noneffective rate for these diseases for 1909 is the highest on record in

this office, although in admission rate it was exceeded in 1905. As usual, the colored troops show a much higher admission rate than do the white, the ratios being 217.24 and 176.04, respectively, but show a decrease as compared with their own race for the preceding year. The following table gives the comparative rates for the past five years for each of these diseases:

TABLE No. 24.—*Venereal diseases, by years, 1905 to 1909, United States, continental (excluding Alaska).*

	Admitted.			Discharged on surgeon's certificate of disability.			Died.			Noneffective.		
	Total.	White.	Colored.	Total.	White.	Colored.	Total.	White.	Colored.	Total.	White.	Colored.
Gonorrhea and results:												
1909	125.27	124.49	147.37	1.36	1.34	2.08	.....	.....	.....	7.22	7.23	7.02
1908	123.50	123.05	151.93	1.06	1.08	.....	.....	.....	.....	6.71	6.72	6.18
1907	107.68	107.68	107.59	1.39	1.37	1.92	0.03	.....	0.96	6.24	6.29	4.63
1906	105.21	106.11	91.49	1.07	1.11	.40	.02	0.03	.....	6.18	6.29	4.48
1905	118.31	120.12	92.05	1.29	1.25	1.80	.02	.03	.....	6.26	6.46	4.08
Chancroid:												
1909	25.33	25.09	32.13	.....	.....	.....	.....	.....	.....	1.54	1.52	2.03
1908	28.20	27.64	63.54	.04	.02	1.38	.....	.....	.....	1.75	1.71	4.38
1907	34.78	34.38	48.03	.....	.....	.....	.....	.....	.....	2.23	2.21	2.73
1906	26.41	26.01	32.65	.05	.03	.40	.....	.....	.....	1.73	1.69	2.48
1905	30.39	30.27	31.85	.05	.05	.....	.....	.....	.....	1.90	1.88	2.08
Syphilis:												
1909	26.85	26.47	37.74	1.92	1.81	5.19	.....	.....	.....	2.68	2.64	3.74
1908	23.15	22.46	66.30	1.62	1.64	.....	.04	.04	.....	2.17	2.14	3.46
1907	25.36	25.43	23.05	2.36	2.43	.....	.....	.....	.....	2.75	2.76	2.45
1906	27.28	27.34	26.20	2.79	2.90	1.19	.05	.03	.40	2.98	3.02	2.40
1905	30.02	30.40	25.54	3.32	3.37	2.70	.02	.....	.30	2.88	2.93	2.34
Total venereal:												
1909	177.46	176.04	217.24	3.28	3.14	7.27	.....	.....	.....	11.44	11.39	12.79
1908	174.84	173.14	281.77	2.73	2.75	1.38	.04	.04	.....	10.63	10.57	14.02
1907	167.82	167.49	178.67	3.74	3.80	1.92	.03	.....	.96	11.22	11.26	9.81
1906	158.91	159.47	150.34	3.91	4.03	1.98	.07	.05	.40	10.90	11.00	9.36
1905	178.72	180.70	154.44	4.66	4.66	4.51	.04	.03	.30	11.05	11.27	8.50

The venereal peril has come to outweigh in importance any other sanitary question which now confronts the army and neither our national optimism nor the Anglo-Saxon disposition to ignore a subject which is offensive to public prudery can longer excuse a frank and honest confrontation of the problem. There is no reason to think that these diseases are beyond the reach of preventive medicine any more than other contagious diseases and their immunity from restriction must be attributed to the public disinclination to discuss them and legislate concerning them. It is now believed by most sociologists as well as sanitarians that the evil being primarily a social one can only be reached by a propaganda of public discussion and education, and that education in sexual matters and in the danger of venereal diseases should begin with the young and be carried on by means of all the agencies of popular enlightenment. A number of state and municipal health authorities as well as private associations are now publishing and distributing literature on this subject. It is believed that the War Department can not do better than adopt this general attitude and many of these methods, including a philosophical indifference to criticism on the part of self-constituted censors of the public morals whose susceptibilities are offended by a public discussion of these questions.

This office on the 25th of January, 1909, called the attention of medical officers throughout the army by circular letter to the importance of making a vigorous and sustained effort to prevent the spread of these diseases.

Reports since the Spanish-American war show a steady and progressive increase in this class of diseases, so that the admission rate, which was 84.59 per 1,000 in 1897, has now reached the enormous figure of 196.99 per 1,000. These figures are out of all proportion to those which obtain in the European armies, the rates for the latter being according to the latest obtainable information—

British (at home 68.4)	75.8
Austro-Hungarian	54.2
French (at home 27.8)	34.8
Prussian	18.7
Bavarian	15.2

Among the measures which have been found most successful in other services in controlling this disease have been the following:

1. The organization of soldiers' clubs, canteens, etc., where enlisted men can find amusement and recreation sufficiently attractive to keep them at home and away from vile resorts.

2. The formation of temperance associations among the enlisted men, the association of intemperance and venereal indulgence being well understood.

3. The early detection of all cases of venereal diseases by periodical physical examination of the men stripped.

4. Keeping all cases of venereal disease under continuous observation and treatment until they are cured. For this purpose venereal registers are kept, and a case once on the books is never lost sight of until cured. Should a man be transferred while under treatment to another post or station, his venereal history goes with him.

5. Instruction of the men by lectures and by informal advice whenever the opportunity offers as to the nature of venereal diseases, the extent of their prevalence among prostitutes, and the grave peril not only to those who contract them, but to their families and posterity. They should also be taught that sexual intercourse is not necessary to good health and the highest degree of mental and physical vigor.

6. Approved measures of personal prophylaxis of those who will, contrary to advice, expose themselves to venereal infection. All the principal European armies, with the exception of that of Great Britain, have officially authorized or directed the use of such prophylactic measures, and a considerable degree of success has attended their use. In some of the Austrian garrisons this system is said to have effected a decrease of 62 per cent in the cases of venereal disease. In the German army equally good results have been reported. The general procedure in all the armies is about the same, though there are slight differences in the details, especially in regard to the particular antiseptic employed.

The importance of personal cleanliness was emphasized and suggestions made for the providing of appropriate prophylactic preparations, where they would be accessible to men who desired to use them.

Many medical officers became interested in the matter and made more or less successful efforts to carry out the suggestions contained in this letter. As, however, in the similar question of typhoid inocu-

lations, it was found that success or failure depended not only upon the zeal and enthusiasm of the medical officer, but upon his success in arousing the interest and securing the cooperation of his commanding officer. The commanding generals of the Departments of California and the East issued instructions to all commanding officers in their departments to cooperate with the post surgeons in the matter. This official support has been of great value. The general commanding the Department of California expressed his opinion that it would have been advisable to have issued the circular letter of recommendation referred to primarily through the official channels of the War Department, and stated:

> I think that we should look this and similar questions fairly in the face and take such action through the proper channels as may be necessary, as this latter course is, in my judgment, the only way to bring about the proper and the best results.

The experience of the past year has demonstrated that in this he is right, and that in this question, which is so vital to the efficiency of the army, substantial progress can only be made by supporting the efforts of the Medical Department with all the power and energy of the military authority.

The United States Navy has suffered to a like degree in its efficiency from venereal diseases and has been in advance of the army in a resolute and rational effort to meet the danger. While the service afloat has a much higher degree of control over the movements of the enlisted men than the land service, and it is correspondingly easier to exercise supervision over their movements, it is believed that the methods pursued there are substantially applicable to the army, and the exercise of military authority involved is not such as is in any way excessive for commanding officers of the army. In brief, it is required that when a sailor returns from pass or other absence he is required when he reports to state to the officer or noncommissioned officer who receives the report whether he has within the past twenty-four hours exposed himself to the risk of contracting venereal disease. If this is admitted he is sent to the hospital for the application of preventive measures. If it is subsequently ascertained that in cases where exposure is denied the enlisted man has told an untruth, he is punished for so doing either by a court-martial or by the withdrawal of privileges.

With certain changes in detail, it is believed that this method can be applied with equal success in the army. Men whose absence will be for more than twenty-four hours or who for other reasons desire it are given an opportunity to take with them a convenient packet for personal cleansing and disinfection. Objection has been made by certain theorists that steps taken to reduce the dangers of illicit intercourse will, by removing the restraining influences of fear of infection, act as an indirect encouragement to vice. This argument can only be admitted if it could be shown that fear does effectually control so imperious and basic an instinct as that with which we have to deal. On the contrary, it has been found in the experience of the navy that a serious treatment of this question by the military and medical authorities and the instruction of the men in the danger of venereal infection and in sexual hygiene generally have resulted in a steady increase of the percentage of those denying exposure in commands where this system is put into practice.

The following statement occurs in a recent report from the Asiatic Station:

> The percentage of "denials of exposure" was 67.75
> There has been a constant monthly increase of this percentage, and this—or what amounts to the same thing, a steady diminution of the number admitting exposure—may have some ethical significance. The prominence given to the question of venereal disease by commanding and medical officers, the talks on personal hygiene, the institution of the prophylactic scheme in itself, have, in the writer's opinion, been beneficial by bringing the better class of men to a greater realization of the evils frequently resulting from exposure, and by stimulating a latent moral sense. In any event, there is no reason to think that a sense of security engendered by the scheme has caused any increase in indulgence. The claim that the scheme will cause a great number of concealments of disease has also been refuted on the *Charleston* by a recent examination of the entire crew, not a single case of concealed disease being found.

Effective work along the lines indicated above has been accomplished at a few posts during the past year, at which have been found the necessary conjunction of a zealous medical officer and a commanding officer thoroughly interested in the matter and willing to energetically support the efforts of the medical officer. A notable example was Fort Shafter, Hawaii, where measures were undertaken for the instruction of the men and the necessary sanitary inspections in July, 1909. The average number for the first seven months of the year for primary venereal diseases was 15, while the average for the last five months of the year was 10 and for the first six months of 1910 has been 6.66.

Notably effective preventive work has also been reported from Ludlow Barracks, Parang, Mindanao. At this post all men being treated for venereal diseases or found infected with them at the sanitary inspections were kept within the limits of the post as long as the disease was in a contagious stage, and all commands joining at the post were promptly examined in order to control the importation of new sources of infection. The sanitary authorities of the town of Parang likewise inspected the public women and segregated those found to be diseased, with the result that the number of cases fell to less than one-third of the former average and of this reduced number most were contributed by the taking up of cases discovered on inspections in the incoming garrisons.

In spite of the good work performed at a few posts in the army the effort has not been general enough nor long continued enough to affect the incidence of these diseases in the army as a whole, nor is it probable that much can be effected in the future unless the matter is taken up with energy and determination by the military authorities and pushed as a fixed policy of the War Department.

UNCINARIASIS.

Uncinariasis has been this year, as last, a subject upon which a considerable amount of work has been done by medical officers, both in the United States and in our insular possessions.

Out of 148 southern-bred recruits examined at Fort Slocum, N. Y., up to November 17, 1909, there were 115 infected with hook worm. According to last annual report of 135 southern-bred recruits or soldiers examined at Jackson Barracks, La., 66 were found infected with hook worm. At Jefferson Barracks, Mo., during the months of

December, 1909, January and February, 1910, all southern-bred recruits enlisted were examined for hook worm and 10 out of 148 examined were found infected, Missouri being counted as a Southern State.

At Columbus Barracks, Ohio, during about the last 14 months, routine examination of the stool of all southern-bred recruits admitted to the hospital for any cause whatever were examined by Capt. Theodore Lamson and by Capt. Albert G. Love, and the following table is taken from the report made by Captain Love:

State and section.	Examined.	Infected.	Per cent infected.	Necator americanus.		Ascaris lumbricoides.		Strongyloides intestinalis.		Trichocephalus dispar.	
				Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
Kentucky (eastern half)	90	33	36⅔	23	25⅝	19	21⅛	3	3⅓	8	8⅞
Tennessee (eastern third)	41	19	46⅓	7	17⅐	11	26¾	3	7⅓		
North Carolina (western fourth)	41	19	46⅓	13	31⅞	4	9¾	4	9¾		
West Virginia (entire State)	30	6	20	2	6⅔	3	10	2	6⅔		
Virginia (western third)	24	9	37½	7	29⅙	2	8⅓	1	4⅛	1	4⅛
Georgia (northern fourth)	19	8	42⅑	8	42⅑						
South Carolina (northeastern sixth)	10	2	20	2	20						
Alabama (northeastern tenth)	5	3	60	3	60						
Other Southern States	4										
Entire section	264	99	37½	65	24⅝	39	14⅞	13	4⅞	9	3⅜

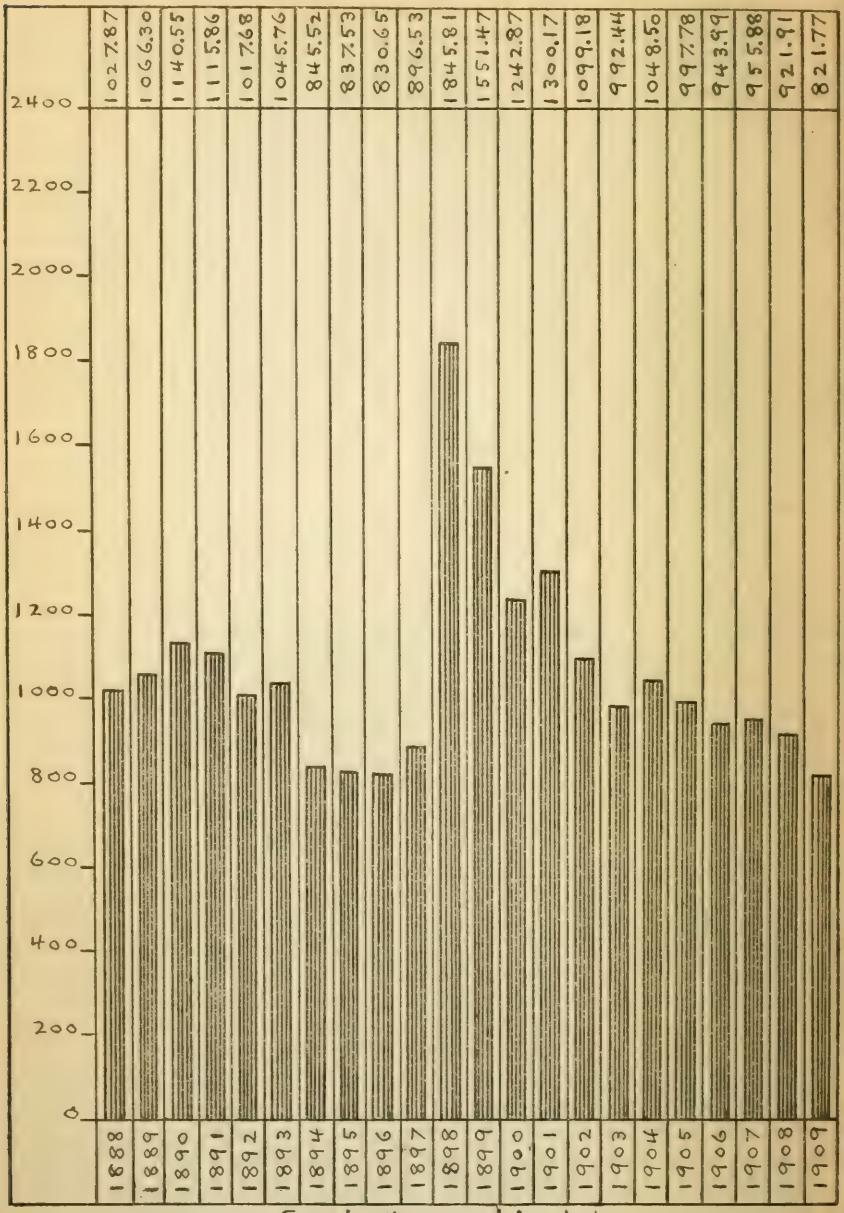
This table is of interest, as it shows both the area of distribution of the hook worm, the percentage varying according to the location, and other intestinal nematodes found in the men examined. At this post one recruit bred in Ohio and one in New Jersey were found infected with hook worm, and one man from Indiana showed infection with *Ascaris lumbricoides* and with *Trichocephalus dispar*, and one with only the latter. In the table each man was counted only once, although there were many multiple infections.

At Fort Slocum, Jackson Barracks, and Jefferson Barracks the "Bass method" of examination was used. At Columbus Barracks a saline was first given and two cover-glass specimen examined of the resulting stool. Apparently the great difference in the per cent found infected at the various depots is largely due to the area from which each depot receives it recruits. This is determined by the cost of transportation to the Government. Thus Fort Slocum's area is approximately east of the area of Columbus Barracks, along the Atlantic seaboard, Jackson Barracks south, along the Gulf coast, and Jefferson Barracks west, Mississippi Valley region.

Out of a total of 695 southern-bred recruits (including a few soldiers at Jackson Barracks) examined at Fort Slocum, N. Y., Jackson Barracks, La., Jefferson Barracks, Mo., and Columbus Barracks, Ohio, 256 men were found infected with hook worm, this being 36.8 per cent.

The tropical board reports that during the last few years there were 19,744 Americans admitted to the division hospital, Manila, and the hospital at Fort William McKinley, P. I. Of this number 90 were found to be infected with hook worm. It is not known how many

CHART R.—*Showing the total admission rate for disease, by years, since 1888, for the United States proper.*



examinations were made. The birth place of these Americans is given below.

Alabama	5	Kansas	2
West Virginia	5	New Jersey	2
Virginia	2	Washington	1
North Carolina	4	Minnesota	1
Georgia	3	Pennsylvania	1
Missouri	2	New Hampshire	1
Tennessee	4	Illinois	5
South Carolina	1	Wisconsin	2
Kentucky	11	No State named	6
Mississippi	2	Holland	1
Louisiana	1	Ireland	5
Texas	2	Sweden	1
Florida	2	Scotland	1
Massachusetts	3	Denmark	1
Indiana	2	Italy	1
Ohio	4	Hungary	1
New York	4	Russia	1

On account of so many of these men being from Northern States, the very pertinent question of the place and manner of infection is raised by the board.

Since our soldiers in the Philippine Islands wear shoes, the question of some other method of infection than through the skin is to be considered.

INFLUENCE OF STATION.

The post having the highest admission rate this year was Fort Mott, N. J., which post also had this unenviable record in 1908. Its total noneffective rate, while above the general rate for the United States, was not as excessive as the admission rate. Jackson Barracks, La., has the second highest admission rate and a higher noneffective rate than Fort Mott. Fort Lincoln, N. Dak., had the lowest admission rate from all causes for the year. The Presidio of Monterey, Cal., had the second lowest admission rate, as was the case last year. The highest total noneffective rate is charged to Fort Ontario, N. Y., with Fort Caswell, N. C., the second highest. The lowest total noneffective rate was at Fort Meade, S. Dak., and the second lowest, Fort Lincoln, N. Dak. Of the recruit depots, Columbus Barracks had the highest admission and noneffective rates. The Department of the Lakes had the highest admission, death, and noneffective rates, and also the highest admission rates for venereal diseases, diarrhea, and articular rheumatism. The Department of the Dakota, which is second in noneffective rate, had the highest admission rates for bronchitis, tonsillitis, and tuberculosis. The Department of California had the lowest admission rate for typhoid fever. The Department of the Colorado had the lowest record for venereal diseases. The occurrence of the various diseases by military departments is shown in Table 69.

The following tables, Nos. 25 and 26, show the posts having the highest and lowest ratios for admissions and noneffectiveness in the United States as a whole:

Military departments, United States, continental (excluding Alaska), showing the relative admission rates for disease.

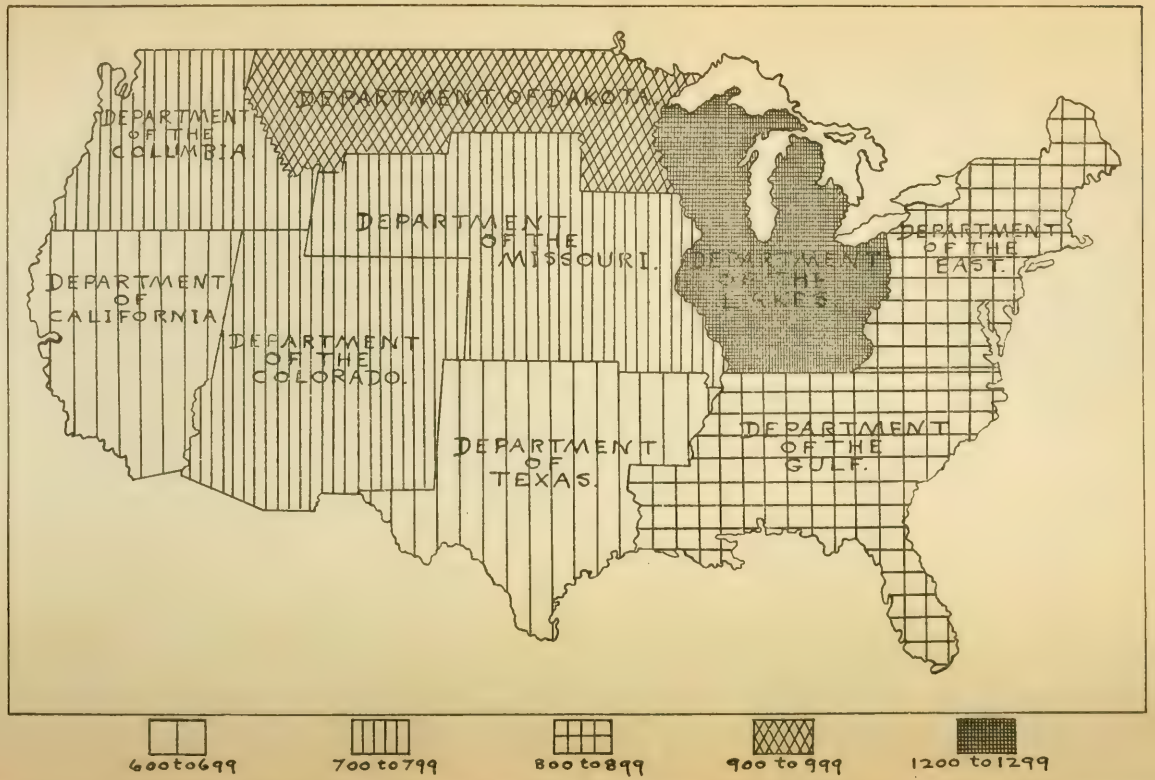


TABLE No. 25.—*Posts having the highest admission and noneffective rates, 1909.*[a]

	Mean strength.	Ratios per 1,000 of mean strength.										Average number of days lost.			
		Admissions to sick report.		Discharged on surgeon's certificate of disability.		Deaths.		Total losses.		Noneffective from sickness.				From all causes.		Excluding injuries, venereal diseases, alcoholism, and vaccinia.	
										From all causes.		Excluding injuries, venereal diseases, alcoholism, and vaccinia.					
		From all causes.	Excluding injuries, venereal diseases, alcoholism, and vaccinia.	From all causes.	Excluding injuries, venereal diseases, alcoholism, and vaccinia.	From all causes.	Excluding injuries, venereal diseases, alcoholism, and vaccinia.	From all causes.	Excluding injuries, venereal diseases, alcoholism, and vaccinia.	Total.	In hospital.	Total.	In hospital.	For each soldier.	For each case.	For each soldier.	For each case.
Highest admission rates from all causes.																	
Fort Mott, N. J	301	**2,720.93**	1,983.39	33.22	26.58	3.32	.....	36.54	26.58	44.70	30.68	25.83	16.35	16.32	6.00	9.43	4.75
Jackson Barracks, La	210	**1,790.48**	1,209.52	23.81	14.29	.....	.....	23.81	14.29	49.33	47.08	26.95	25.44	18.00	10.06	9.84	8.13
Fort Thomas, Ky	499	**1,541.08**	941.88	14.03	10.02	6.01	2.00	20.04	12.02	50.63	41.13	26.96	21.70	18.48	11.99	9.84	10.45
Fort Ontario, N. Y	204	**1,524.51**	720.59	49.02	14.71	.....	.....	49.02	14.71	57.01	42.60	23.74	18.57	20.81	13.65	8.67	12.03
Fort Assinniboine, Mont	253	**1,450.59**	984.19	23.72	15.81	.....	.....	23.72	15.81	36.86	34.75	23.61	22.19	13.45	9.28	8.62	8.76
Highest admission rates, excluding injuries, etc.																	
Fort Mott, N. J	301	2,720.93	**1,983.39**	33.22	26.58	3.32	.....	36.54	26.58	44.70	30.68	25.83	16.35	16.32	6.00	9.43	4.75
Jackson Barracks, La	210	1,790.48	**1,209.52**	23.81	14.29	.....	.....	23.81	14.29	49.33	47.08	26.95	25.44	18.00	10.06	9.84	8.13
Fort Assinniboine, Mont	253	1,450.59	**984.19**	23.72	15.81	.....	.....	23.72	15.81	36.86	34.75	23.61	22.19	13.45	9.28	8.62	8.76
Fort Caswell, N. C	343	1,329.45	**959.18**	17.49	11.66	2.92	2.92	20.41	14.58	53.52	40.49	31.84	26.02	19.53	14.69	11.75	12.25
Fort Thomas, Ky	499	1,541.08	**941.88**	14.03	10.02	6.01	2.00	20.04	12.02	50.63	41.13	26.96	21.70	18.48	11.99	9.84	10.45
Highest noneffective rates from all causes.																	
Fort Ontario, N. Y	204	1,524.51	720.59	49.02	14.71	.....	.....	49.02	14.71	**57.01**	42.60	23.74	18.57	20.81	13.65	8.67	12.03
Fort Caswell, N. C	343	1,329.45	959.18	17.49	11.66	2.92	2.92	20.41	14.58	**53.52**	40.49	31.84	26.02	19.53	14.69	11.75	12.25
Fort Thomas, Ky	499	1,541.08	941.88	14.03	10.02	6.01	2.00	20.04	12.02	**50.63**	41.13	26.96	21.70	18.48	11.99	9.84	10.45
Fort Snelling, Minn	1,107	1,397.47	876.24	27.10	18.97	6.32	1.81	33.42	20.78	**50.57**	41.09	27.72	22.52	18.46	13.21	10.12	11.55
Jackson Barracks, La	210	1,790.48	1,209.52	23.81	14.29	.....	.....	23.81	14.29	**49.33**	47.08	26.95	25.44	18.00	10.06	9.84	8.13
Highest noneffective rates, excluding injuries, etc.																	
Fort Caswell, N. C	343	1,329.45	959.18	17.49	11.66	2.92	2.92	20.41	14.58	53.52	40.49	**31.84**	26.02	19.53	14.69	11.75	12.25
Fort Snelling, Minn	1,107	1,397.47	876.24	27.10	18.97	6.32	1.81	33.42	20.78	50.57	41.09	**27.72**	22.52	18.46	13.21	10.12	11.55
Fort Brady, Mich	212	1,113.21	627.36	14.15	9.43	9.43	.....	23.58	9.43	49.06	45.35	**27.58**	26.21	17.91	16.08	10.07	16.05
Fort Thomas, Ky	499	1,541.08	941.88	14.03	10.02	6.01	2.00	20.04	12.02	50.63	41.13	**26.96**	21.70	18.48	11.99	9.84	10.45
Jackson Barracks, La	210	1,790.48	1,209.52	23.81	14.29	.....	.....	23.81	14.29	49.33	47.08	**26.95**	25.44	18.00	10.06	9.84	8.13

[a] Recruit depots not considered.

TABLE No. 26.—*Posts having the lowest admission and noneffective rates for 1909.*[a]

	Mean strength.	Ratios per 1,000 of mean strength.										Average number of days lost.			
		Admissions to sick report.		Discharged on surgeon's certificate of disability.		Deaths.		Total losses.		Noneffective from sickness.				From all causes.		Excluding injuries, venereal diseases, alcoholism, and vaccinia.	
										From all causes.		Excluding injuries, venereal diseases, alcoholism, and vaccinia.					
		From all causes.	Excluding injuries, venereal diseases, alcoholism, and vaccinia.	From all causes.	Excluding injuries, venereal diseases, alcoholism, and vaccinia.	From all causes.	Excluding injuries, venereal diseases, alcoholism, and vaccinia.	From all causes.	Excluding injuries, venereal diseases, alcoholism, and vaccinia.	Total.	In hospital.	Total.	In hospital.	For each soldier.	For each case.	For each soldier.	For each case.
Lowest admission rates from all causes.																	
Fort Lincoln, N. Dak	294	**605.44**	346.94	.....	.....	.....	.....	.....	.....	17.17	16.21	6.55	6.22	6.27	10.35	2.39	6.89
Presidio of Monterey, Cal	932	**609.44**	332.62	2.15	2.15	5.36	2.15	7.51	4.30	18.35	16.77	8.86	8.32	6.70	10.99	3.23	9.72
Fort Niagara, N. Y	313	**632.59**	437.70	.....	.....	12.78	6.39	12.78	6.39	21.19	18.89	16.45	15.17	7.73	12.23	6.00	13.72
Fort Ethan Allen, Vt	635	**642.52**	270.87	7.87	6.30	6.30	3.15	14.17	9.45	23.63	21.61	9.34	8.31	8.63	13.42	3.41	12.59
Fort McIntosh, Tex	271	**653.14**	305.31	7.38	7.38	.....	.....	7.38	7.38	40.00	35.82	18.87	16.57	14.60	22.36	6.89	18.86
Lowest admission rates, excluding injuries, etc.																	
Fort Ethan Allen, Vt	635	642.52	**270.87**	7.87	6.30	6.30	3.15	14.17	9.45	23.63	21.61	9.34	8.31	8.63	13.42	3.41	12.59
Fort Revere, Mass	223	780.27	**318.39**	4.48	4.48	4.48	4.48	8.96	8.96	28.71	24.95	9.44	8.66	10.48	13.43	3.44	10.84
Presidio of Monterey, Cal	932	609.44	**332.62**	2.15	2.15	5.36	2.15	7.51	4.30	18.35	16.77	8.86	8.32	6.70	10.99	3.23	9.72
Fort Lincoln, N. Dak	294	605.44	**346.94**	.....	.....	.....	.....	.....	.....	17.17	16.21	6.55	6.22	6.27	10.35	2.39	6.89
Fort McIntosh, Tex	271	653.14	**365.31**	7.38	7.38	.....	.....	7.38	7.38	40.00	35.82	18.87	16.57	14.60	22.36	6.89	18.86
Lowest noneffective rates from all causes.																	
Fort Meade, S. Dak	564	695.04	381.21	10.64	1.77	1.77	1.77	12.41	3.54	**16.85**	16.35	6.96	6.72	6.15	8.85	2.54	6.66
Fort Lincoln, N. Dak	294	605.44	346.94	.....	.....	.....	.....	.....	.....	**17.17**	16.25	6.55	6.22	6.27	10.35	2.39	6.89
Presidio of Monterey, Cal	932	609.44	332.62	2.15	2.15	5.36	2.15	7.51	4.30	**18.35**	16.77	8.86	8.32	6.70	10.99	3.23	9.72
Fort Du Pont, Del	469	805.97	447.76	4.26	2.13	12.79	.....	17.05	2.13	**20.42**	17.80	11.22	9.69	7.45	9.25	4.09	9.14
Fort Schuyler, N. Y	300	680.00	423.33	10.00	6.67	.....	.....	10.00	6.67	**20.90**	19.84	13.84	13.40	7.63	11.22	5.05	11.94

Lowest noneffective rates, excluding injuries, etc.																	
Fort Lincoln, N. Dak.	294	605.44	346.94	.....	.....	.....	.....	.....	.....	17.17	16.25	**6.55**	6.22	6.27	10.35	2.39	6.89
Fort Meade, S. Dak.	564	695.04	381.21	10.64	1.77	1.77	1.77	12.41	3.54	16.85	16.35	**6.96**	6.72	6.15	8.85	2.54	6.66
Fort Oglethorpe, Ga.	743	982.50	393.00	6.73	1.35	1.35	.....	8.08	1.35	27.76	26.20	**7.92**	7.37	10.13	10.31	2.89	7.35
Fort Stevens, Oreg.	346	754.34	401.73	17.34	8.67	.....	.....	17.34	8.67	21.81	20.76	**7.99**	7.73	7.96	10.56	2.92	7.26
Presidio of Monterey, Cal.	932	609.44	332.62	2.15	2.15	5.36	2.15	7.51	4.30	18.35	16.77	**8.86**	8.32	6.70	10.99	3.23	9.72
RECRUIT DEPOTS.																	
Columbus Barracks, Ohio	1,111	2,213.32	1,493.25	45.00	37.81	7.20	7.20	52.20	45.01	64.07	57.42	43.50	38.93	23.39	10.57	15.88	10.63
Fort Slocum, N. Y.	1,080	1,688.89	1,092.59	67.59	48.15	3.70	2.78	71.29	50.93	45.80	38.50	27.63	24.04	16.72	9.90	10.08	9.23
Jefferson Barracks, Mo.	1,052	1,273.76	853.61	52.28	36.12	4.75	1.90	57.03	38.02	39.59	36.37	22.21	19.89	14.45	11.35	8.11	9.50
Fort McDowell (including Angel Island), Cal. [b]	346	1,332.37	736.99	37.57	20.23	2.89	.....	40.46	20.23	34.39	30.60	15.23	14.07	12.55	9.42	5.56	7.54
Fort Logan, Colo. (Sept. 1 to Dec. 31, 1909) [c]	143	1,503.50	860.14	118.88	97.90	6.99	6.99	125.87	104.89	48.07	39.93	27.74	24.22	17.55	11.67	10.13	11.77

[a] Recruit depots not considered.
[b] Recruit depot, Angel Island, closed June 4, 1909, is consolidated for this purpose with Fort McDowell, Cal.; opened June 4, 1909, as a recruit depot.
[c] Fort Logan, Colo., opened as a recruit depot September 1, 1909. Its mean strength September 1 to December 31 was 428; averaged for the year, 143 men.

INFLUENCE OF AGE AND LENGTH OF SERVICE.

As usual, the admission and discharge and noneffective rates were highest for the youngest soldiers and those serving their first enlistment, and the death rate was highest among those 45 years of age or over having ten years or more service. The lowest admission rate occurred in soldiers between 45 and 50 years of age, and the lowest constantly noneffective rate in those between 35 and 40.

The following table exhibits the effects of age and length of service upon rates for disease:

TABLE No. 27.—*Influence of disease on troops serving in the United States, continental (excluding Alaska), by age and length of service, year 1909.*

Length of service.	Mean strength.	Admitted.	Discharged on surgeon's certificate of disability.	Died.	Constantly noneffective.	Ratios per 1,000 of mean strength.			
						Admitted.	Discharged on surgeon's certificate of disability.	Died.	Constantly noneffective.
Under 1 year	15,654	17,971	500	46	692.95	1,148.01	31.86	2.93	44.27
1 to 2 years	13,879	11,864	199	21	494.60	854.82	14.30	1.51	35.64
2 to 3 years	5,910	4,353	43	8	173.24	736.55	7.26	1.35	29.31
3 to 4 years	4,298	2,505	57	14	133.39	582.83	13.23	3.25	26.38
4 to 5 years	3,541	2,199	46	8	91.85	621.01	12.96	2.25	25.94
5 to 10 years	7,876	4,799	80	26	202.40	609.32	10.13	3.29	25.70
10 years and over	5,966	3,252	49	47	149.17	545.09	8.19	7.86	25.00
Total	57,124	46,943	974	170	1,917.61	821.78	17.01	2.97	33.57

Age.	Mean strength.	Admitted.	Discharged on surgeon's certificate of disability.	Died.	Constantly noneffective.	Ratios per 1,000 of mean strength.			
						Admitted.	Discharged on surgeon's certificate of disability.	Died.	Constantly noneffective
19 years and under	2,820	3,458	69	7	123.26	1,226.24	24.41	2.48	43.71
20 to 24 years	24,753	24,615	458	58	961.75	994.42	18.45	2.34	38.85
25 to 29 years	15,614	11,167	273	32	480.96	715.19	17.44	2.04	30.80
30 to 34 years	7,515	4,316	105	25	188.06	574.32	13.93	3.32	25.02
35 to 39 years	3,432	1,816	38	19	81.33	529.14	11.04	5.52	23.70
40 to 44 years	1,732	912	19	16	43.56	526.56	10.94	9.22	25.15
45 to 49 years	900	414	9	7	22.14	460.00	9.98	7.76	24.60
50 years and over	358	245	3	6	16.55	684.36	8.30	16,71	46.23
Total	57,124	46,943	974	170	1,917.61	821.78	17.01	2.97	33.57

INFLUENCE OF SEASON.

Excluding venereal diseases, alcoholism, and injuries, the highest admission, death, and constantly noneffective rates occurred in March. The lowest admission rate was in November, and the lowest death and constantly noneffective rates were in October. The following table (No. 28) shows the movement of sick by months. A study of these data for previous years shows a wide variation in the months

showing the several highest and lowest rates. It can be stated, however, in general terms that all rates are highest in the first half of the year and lowest in the second half. February and March give the highest constantly noneffective rates and June–July the lowest.

TABLE No. 28.—*Influence of season, United States, continental (excluding Alaska), year 1909.*

Month.	Mean strength.	Ratios per 1,000 of mean strength.								Prevailing diseases (exclusive of venereal diseases, etc.)
		All causes.					Exclusive of venereal diseases, alcoholism, vaccinia, and injuries.			
		Admissions.		Deaths.	Noneffective.		Admissions.	Deaths.	Noneffective.	
		Total.	Hospital.		Total.	Hospital.				
Jan.....	56,078	98.54	75.68	0.49	41.51	36.61	59.35	0.24	22.15	Tonsillitis, 558; acute bronchitis, 230; influenza, 164; muscular rheumatism, 135.
Feb.....	58,261	91.76	71.69	.41	41.26	36.06	58.48	.26	23.39	Tonsillitis, 507; influenza, 281; acute bronchitis, 219; muscular rheumatism, 118.
Mar.....	58,846	111.83	84.18	.51	45.33	39.27	75.13	.34	26.55	Influenza, 703; tonsillitis, 604; acute bronchitis, 307.
Apr.....	57,802	98.96	77.25	.44	44.98	39.39	62.61	.31	26.19	Influenza, 407; tonsillitis, 397; acute bronchitis, 199.
May.....	56,956	81.89	61.22	.46	40.75	35.91	48.16	.28	23.24	Tonsillitis, 247; acute bronchitis, 140; constipation, 122; muscular rheumatism, 122.
June....	56,189	80.55	60.42	.52	39.49	35.06	44.55	.25	21.89	Tonsillitis, 159; furuncles, 139; malarial diseases, 138; constipation, 126.
July.....	55,261	81.72	59.99	.36	38.41	33.88	45.08	.14	20.35	Diarrhea and enteritis, 234; malarial diseases, 163; furuncles, 155; dyspepsia, 125.
Aug.....	56,722	82.59	61.54	.37	36.63	32.55	47.99	.18	19.40	Diarrhea and enteritis, 314; malarial diseases, 257; dyspepsia, 180; tonsillitis, 151; furuncles, 150.
Sept....	56,867	70.90	53.10	.28	35.23	31.35	39.69	.19	18.59	Malarial diseases, 210; diarrhea and enteritis, 210; dyspepsia, 165; furuncles, 133; tonsillitis, 125.
Oct.....	57,478	74.03	56.21	.26	35.38	31.17	38.01	.12	17.92	Malarial diseases, 157; diarrhea and enteritis, 141; tonsillitis, 137; acute bronchitis, 128; furuncles, 124.
Nov.....	57,399	73.26	56.69	.40	37.71	33.84	37.44	.24	18.55	Tonsillitis, 305; acute bronchitis, 150; furuncles, 106; muscular rheumatism, 105.
Dec.....	57,630	77.39	60.63	.36	38.25	34.42	42.79	.27	19.12	Tonsillitis, 380; acute bronchitis, 198; muscular rheumatism, 126; influenza, 106.
Total.	57,124	1,024.37	779.48	4.84	39.70	35.06	600.29	2.85	21.51	Tonsillitis, 3,685; influenza, 1,992; acute bronchitis, 1,935; diarrhea and enteritis, 1,603; coryza, 1,491; muscular rheumatism, 1,416; furuncles, 1,414.

INFLUENCE OF RACE.

For 1909 the rates for admission and noneffectiveness were higher for the white troops, and the rates for discharges and deaths higher for the colored troops in the United States (continental). Last year

the white troops had the higher admission and discharge rates and the colored troops the higher total noneffective and death rates.

The relative prevalence of the several diseases in the two races are shown in Table No. 62 at the end of this report.

DISCHARGES FOR DISABILITY.

The disability discharge rate for the United States for 1909 was 18.87 per 1,000, as compared with 21.35 for 1908 and 25.36 and 32.29 for 1907 and 1906, respectively. The causes of this steady improvement are the same for the United States and for the whole army and are explained in connection with the figures for the latter.

The principal causes of discharges, with the percentages of discharges, were as follows: (1) Venereal diseases, 19.30; (2) tuberculosis, 12.32; (3) diseases of the heart, 8.43; (4) insanity, 8.11; (5) epilepsy, 5.24. The proportion of those discharged for disability contracted previous to enlistment to the total discharges was 40 per cent.

The following table shows the causes of discharges for disability for the year 1909, United States (continental):

TABLE NO. 29.—*Discharges for disability, year 1909, United States, continental (excluding Alaska).*

Cause of discharge.	Number discharged.	Percentage of total discharges.	Discharges for disability.						
			Not in line of duty.			Discharged for disability before assignment.		January to August, inclusive.	September to December, inclusive.
			In line of duty.	Contracted before enlistment.	Contracted after enlistment.	In line of duty.	Not in line of duty.		
General diseases	396	40.66	152	62	182	2	25	323	73
Venereal diseases	188	19.30	2	21	165	.....	13	169	19
Syphilis (primary, 1; secondary, 88; tertiary, 21).	110	11.29	1	9	100	.....	6	102	8
Gonorrhea (rheumatism, 57; chronic gonorrhea, 9; ophthalmia, 5; orchitis, 5; fistula, 1; other results, 1)	78	8.01	1	12	65	.....	7	67	11
Tuberculosis (of the lungs, 111; other organs, 9)	120	12.32	110	10	.....	.....	2	77	43
Chronic articular rheumatism	23	2.36	16	7	.....	.....	2	20	3
Chronic alcoholism	19	1.95	.....	9	10	.....	8	19	.....
Drug habit (cocaine, 9; opium, 4)	13	1.33	.....	6	7	.....	.....	11	2
Diabetes	7	.72	5	2	.....	.....	.....	4	3
Exophthalmic goiter	7	.72	2	5	.....	.....	.....	6	1
Chronic amœbic dysentery	5	.51	5	.....	.....	.....	.....	5	.....
Cancer	3	.31	3	.....	.....	.....	.....	2	1
Cerebrospinal meningitis	2	.21	2	.....	.....	.....	.....	1	1
Acute articular rheumatism	2	.21	1	1	.....	1	.....	2	.....
Chronic malarial cachexia	1	.10	1	.....	.....	.....	.....	1	.....
Leprosy	1	.10	1	.....	.....	.....	.....	1	.....
Results of septic infection	1	.10	1	.....	.....	1	.....	1	.....
Tumor (nonmalignant)	1	.10	1	.....	.....	.....	.....	1	.....
Obesity	1	.10	.....	1	.....	.....	.....	1	.....
Leukemia	1	.10	.....	1	.....	.....	.....	1	.....
Chronic plumbism	1	.10	1	.....	.....	.....	.....	1	.....
Diseases of the nervous system	176	18.07	62	105	9	.....	27	132	44
Insanity	79	8.11	40	31	8	.....	1	48	31
Epilepsy	51	5.24	3	47	1	.....	17	45	6
Neurasthenia	17	1.75	7	10	.....	.....	.....	16	1
Other diseases of the nervous system (unstable nervous organization, 8; hysteria, 2; stammering, 1; syncope, 1; hereditary tremors, 1)	13	1.33	1	12	.....	.....	7	8	5
Chronic neuralgia	4	.41	1	3	.....	.....	1	4	.....

TABLE No. 29.—*Discharges for disability, year 1909, United States, continental (excluding Alaska)*—Continued.

Cause of discharge.	Number discharged.	Percentage of total discharges.	Discharges for disability.						
			In line of duty.	Not in line of duty.		Discharged for disabillty before assignment.		January to August, inclusive.	September to December, inclusive.
				Contracted before enlistment.	Contracted after enlistment.	In line of duty.	Not in line of duty.		
Diseases of the nervous system—Continued.									
Neuritis	3	.31	2	1	.....	.....	1	3	.....
Locomotor ataxia	3	.31	3	.....	.....	.....	.....	2	1
Paralysis without specified cause	3	.31	3	.....	.....	.....	.....	3	.....
Chorea	2	.21	1	1	.....	.....	.....	2	.....
Lateral sclerosis	1	.10	1	.....	.....	.....	.....	1	.....
Diseases of the circulatory system	94	9.65	49	41	4	6	10	76	18
Organic disease of the heart	69	6.16	39	21	.....	5	6	48	12
Functional disease of the heart	18	1.85	4	12	2	1	3	16	2
Varicose veins	4	.41	1	3	.....	.....	.....	2	2
Aneurism	3	.31	.....	2	1	.....	.....	3	.....
Arterio sclerosis	3	.31	3	.....	.....	.....	.....	2	1
Angina pectoris	2	.21	1	1	.....	.....	1	2	.....
Cardiac neurosis	2	.21	.....	1	1	.....	.....	2	.....
Cerebral thrombosis	1	.10	1	.....	.....	.....	.....	.....	1
Varicocele	1	.10	.....	1	.....	.....	.....	1	.....
Congenital malformations and arrested development	65	6.67	.....	65	.....	.....	10	52	13
Diseases of the digestive system	64	6.57	30	32	2	.....	11	52	12
Hernia	30	3.08	13	17	.....	.....	7	25	5
Chronic gastritis	9	.92	1	7	1	.....	1	7	2
Appendicitis	7	.72	4	3	.....	.....	1	5	2
Cirrhosis of the liver	3	.31	3	.....	.....	.....	.....	2	1
Chronic dyspepsia	3	.31	.....	3	.....	.....	.....	3	.....
Chronic gastro-enteritis	3	.31	3	.....	.....	.....	.....	2	1
Chronic diarrhea	2	.21	1	.....	1	.....	.....	2	1
Pyorrhea alveolaris	1	.10	1	.....	.....	.....	.....	1	.....
Chronic pharyngeal and eustachian catarrh	1	.10	1	.....	.....	.....	.....	1	.....
Chronic gastric ulcer	1	.10	.....	1	.....	.....	1	1	.....
Ankylostomiasis	1	.10	1	.....	.....	.....	.....	1	.....
Chronic constipation	1	.10	1	.....	.....	.....	.....	1	.....
Ischio-rectal fistula	1	.10	.....	1	.....	.....	1	1	.....
Hepatic abscess (amœbic)	1	.10	1	.....	.....	.....	.....	.....	1
Diseases of the organs of special sense	53	5.44	24	27	2	.....	4	47	6
Diseases of the middle and internal ear (otitis media, 18; deafness, 4)	22	2.26	10	12	.....	.....	2	18	4
Diseases of the globe (iritis, 3; vitreous opacities, 3; keratitis, 2; retro-bulbar neuritis, 1; central scotoma, 1)	10	1.03	9	1	.....	.....	1	10	.....
Errors of refraction	5	.51	.....	5	.....	.....	.....	5	.....
Trachoma	3	.31	.....	3	.....	.....	.....	3	.....
Cataract	3	.31	2	.....	1	.....	.....	2	1
Amblyopia	3	.31	2	1	.....	.....	.....	3	.....
Chronic conjunctivitis	2	.21	.....	2	.....	.....	.....	2	.....
Chronic blepharitis	1	.10	.....	1	.....	.....	.....	1	.....
Asthenopia	1	.10	.....	1	.....	.....	1	1	.....
Night blindness	1	.10	.....	1	.....	.....	.....	.....	1
Optic neuritis	1	.10	.....	.....	1	.....	.....	1	.....
Complete destruction right ear drum	1	.10	1	.....	.....	.....	.....	1	.....
Diseases of the genito-urinary system	48	4.93	16	32	.....	1	14	42	6
Diseases of the bladder (enurisis, 25; cystitis, 1)	26	2.67	1	25	.....	.....	11	24	2
Diseases of the kidneys (Brights disease, 15; pyelitis, 1; nephrolithiasis, chronic, 1)	17	1.75	14	3	.....	1	1	13	4
Orchitis	2	.21	1	1	.....	.....	.....	2	.....
Multiple urinary fistulæ	1	.10	.....	1	.....	.....	1	1	.....
Hydrocele	1	.10	.....	1	.....	.....	1	1	.....
Undescended testicle	1	.10	.....	1	.....	.....	.....	1	.....
Diseases of the organs of locomotion	39	4.00	23	16	.....	.....	1	33	6
Diseases of the joints (flat feet, 8; arthritis, 8; hammer toes, 3; ankylosis, 3; synovitis, 2)	24	2.46	16	8	.....	.....	.....	20	4
Diseases of the bones (periostitis, 2; exostosis, 2; ostitis, 1; curvature of spine, 1)	6	.62	4	2	.....	.....	.....	4	2
Muscular rheumatism	5	.51	2	3	.....	.....	.....	5	.....
Contraction of ligaments and tendons	3	.31	1	2	.....	.....	.....	3	.....
Myotonia	1	.10	.....	1	.....	.....	1	1	.....

TABLE NO. 29.—*Discharges for disability, year 1909, United States, continental (excluding Alaska)*—Continued.

Cause of discharge.	Number discharged.	Percentage of total discharges.	Discharges for disability.						
			In line of duty.	Not in line of duty.		Discharged for disability before assignment.		January to August, inclusive.	September to December, inclusive.
				Contracted before enlistment	Contracted after enlistment.	In line of duty.	Not in line of duty.		
Diseases of the respiratory system	29	2.98	8	21	.....	.....	2	24	5
Diseases of the lungs (chronic pleurisy, 8; asthma, 8; chronic bronchitis, 3; pulmonary emphysema, 3; pneumoconiosis, 1)	23	2.36	8	15	.....	.....	1	18	5
Goiter	3	.31	.....	3	.....	.....	.....	3	.....
Chronic nasal catarrh	2	.21	.....	2	.....	.....	1	2	.....
Deviation of septum, and hypertrophy of turbinate bone	1	.10	.....	1	.....	.....	.....	1	.....
Diseases of the skin and cellular tissue (corns, 5; chronic ulcer, 1; chronic acne, 1; chronic psoriasis, 1; hyperidrosis, 1)	9	.92	1	8	.....	.....	1	8	1
Ill-defined diseases (painful adhesions following herniotomy wound incurred prior to enlistment)	1	.10	.....	1	.....	.....	.....	1	.....
Total	974	100.00	365	410	199	9	105	795	179
EXTERNAL CAUSES.									
Fractures	26	24.30	21	.....	5	.....	.....	21	5
Secondary results of injuries	23	21.50	.....	23	.....	.....	3	22	1
Gunshot wounds	16	14.95	13	.....	3	.....	.....	13	3
Incised wounds	9	8.41	6	.....	3	1	.....	6	3
Crushing	8	7.48	8	.....	.....	1	.....	7	1
Sprains	8	7.48	8	.....	.....	.....	.....	7	1
Lacerated wounds	5	4.67	3	.....	2	.....	.....	5	.....
Burns	3	2.80	1	.....	2	.....	.....	2	1
Dislocations	2	1.87	1	.....	1	.....	.....	1	1
Frostbite	2	1.87	2	.....	.....	.....	.....	1	1
Muscular strain	1	.93	1	.....	.....	.....	.....	1	.....
Punctured wounds	1	.93	1	.....	.....	1	.....	1	.....
Burn from lye	1	.93	1	.....	.....	.....	.....	1	.....
Sunstroke	1	.93	1	.....	.....	.....	.....	.....	1
Electric shock	1	.93	1	.....	.....	.....	.....	.....	1
Total	107	100.00	68	23	16	3	3	88	19
Total, disease	974	90.10	365	410	199	9	105	790	184
Total, external causes	107	9.90	68	23	16	3	3	88	19
Grand total	1,081	100.00	433	433	215	12	108	878	203

SANITATION.

Attention was called in my last report to the increased difficulty of obtaining pure sources of water supply as the military reservations become more and more hemmed in by the growth of the civil population, to the danger to the latter caused by the discharge of untreated sewage from military posts into neighboring streams, and to the importance of proceeding at once to establish suitable plants for the purification of water and sewage. There has been during the year notable progress in this direction. A most important step in the satisfactory solution of these problems has been the appointment of a board, consisting of an assistant to the Quartermaster-General and two officers from this office, to make a study of each project and formu-

late a general plan for its solution as an initial step. In this way the two departments especially charged with responsibilities in sanitary matters are enabled to work in unison, instead of being without concert and mutual understanding, as has often happened in the past.

This board, which was organized by paragraph 8, Special Order No. 238, October 13, 1909, first took up the study of the water supply and sewage-disposal plant at Fort Leavenworth, which has been a matter of complaint and correspondence for more than ten years. The water supply of this post is furnished by the city of Leavenworth and Fort Leavenworth Water Company, and is drawn from the Missouri River about 1,200 yards below the outfall of the post sewer. This arrangement properly caused much criticism from medical officers and complaint and alarm among the garrison. In 1902 a board of officers considered the matter and recommended the filtration of the water supply and a system of purification of the sewage. Both were subsequently installed, and it appears that the filter in connection with a good system of sedimentation has worked well and furnished a good water supply. The board organized by Special Order No. 238 in its visit of inspection in November found, however, that the sewage-purification plant, consisting of a septic tank and contact beds, was not well planned and has suffered from almost total neglect extending over a number of years. In consequence it only partially accomplished its purpose. The board recommended as a temporary measure certain alterations in this plant which, while not expensive, would correct the faults found to exist. As this plant is now being surrounded by the post and can not provide for its extension, the board recommended the final removal of the plant to a point nearer Leavenworth and the bringing upstream of the intake of the water company so that it would be above the sewer outfall. These recommendations have received the approval of the Secretary of War. The water company later made a counter proposal, showing that practical difficulties existed in moving the intake upstream and suggesting that it remain as at present and that the sewer be brought downstream and the outfall located at a point below the water-supply intake. This change was in principle approved by the board, and it is now being investigated by the Quartermaster's Department with reference to the engineering and legal questions involved.

The question of pollution of the water supply of Fort Sheridan, Ill., involving the larger question of the pollution of Lake Michigan, which was discussed in my last report, was also studied by the board, which visited Chicago and looked into the general question as well as the local condition at Fort Sheridan. They recommended the installation of a system of rapid gravity filters and also of a sewage-purification plant which should accomplish the following results:

1. The deposition in basins (hydrolitic tanks) of the coarse matters suspended in the sewage and which as a rule have a specific gravity greater than that of water.

2. The accumulation of the sludge on the bottom of the basins under conditions facilitating bacterial activity so as to liquefy and gasify, so far as possible, the solid organic matters in the sludge.

3. The disposal of the residual sludge from the hydrolitic tanks upon land in such manner that its water is quickly reduced by evaporation and filtration, and the resulting fairly dry humus and mineral matter is inodorous and inoffensive.

4. The application of the partially clarified sewage coming from the hydrolitic tanks to "sprinkling filters," in the form of spray, under such conditions that the remaining putrefying organic matter in the sewage is so acted upon that the effluent from the sprinkling filters will not be putrescible, and so that the bacteria in the sewage will be largely eliminated.

5. The deposition in small settling basins of the coarser suspended particles contained in the effluent of the sprinkling filters and coming for the most part as films detached from the broken stone in the sprinkling filters.

It is considered by the board that for the purpose had in view at Fort Sheridan, Ill., filtration of the effluent will not be necessary. If at any time there should be evidence that this effluent constituted a danger of infection of the water supply, or if the concerted agreement of neighboring municipalities demanded it, sterilization could be obtained more easily and cheaply by the installation of a dosing chamber for the use of hypochlorite of lime in connection with the small settling basins referred to in paragraph 5 above than by filtration of the effluent.

The board has under investigation the application of ozone produced by an electric current for the purification of water, especially with a view to its installation at Fort Niagara, N. Y., where there is an unlimited supply of clear but polluted water, and electric current can be obtained at a low rate. The plants in operation in this country are understood not to be in all respects satisfactory, but a small experimental apparatus is being installed at the Army Medical Museum which will materially assist in the study of the question.

FORT GREBLE, R. I.

The regular water supply of the post from the Saunderstown springs having proved deficient, additional water had to be purchased which proved to be of suspicious quality, and recommendation was made by the surgeon that it be boiled. The commanding officer recommended the construction of an additional storage reservoir to contain 1,000,000 gallons. No money was available for this purpose during the fiscal year and the Quartermaster-General stated that an estimate had been submitted in connection with the 1911 estimate for it.

FORT HOWARD, MD.

The water is pumped from a driven well 314 feet deep and is of exceptional purity, but contains much iron which requires aeration and filtration for its removal. It having been reported that the filter was clogged and the pipes being filled up with precipitated iron, the department commander recommended that the matter be referred to the board of officers appointed by Special Order 238, 1909, for recommendation. The board found that the system of pumping with air furnished the necessary aeration to precipitate the iron, but that further sedimentation was needed for its precipitation than was at present furnished. It was recommended, therefore, that a sedimentation basin of 60,000 gallons adjoining the present basin be constructed and that the filter be cleaned out.

JACKSON BARRACKS, LA.

The surgeon recommended that the waterworks and sewer system of the post be connected with the recently installed water and sewer system of the city of New Orleans. At present, in addition to the cisterns, water is drawn from the river about 1,000 yards below the discharge of the main sewer of the city. This water, although filtered, is not considered safe.

FORT McKINLEY, ME.

The water is from wells and has usually been insufficient in summer. To increase the supply three new wells have been sunk, of which various analyses have been made. The water is reported as very hard and the deepest well (No. 3) gives a water highly charged with iron which will require sedimentation before use. The recommendation of the surgeon that two sedimentation tanks of 30,000 gallons capacity each be constructed was approved by this office.

FORT MEADE, S. DAK.

A new and excellent supply of water has been provided by damming Dead Mans Creek. The watershed of this stream is owned by the Government with the exception of a small area, and not subject to pollution, and the commanding officer has recommended the purchase of the area not so owned, which being mountainous and denuded of timber is of small value.

FORT OGLETHORPE, GA.

The water supply is from deep wells driven through a limestone formation which abounds in fissures and underground channels. The well upon which the post mainly depends for supply has been cased to a considerable depth in the hope of shutting off seepage from the surface, but without success. Salt placed in a sink hole near the hospital soon caused an increase in the chlorides of the well water. Three wells have been bored during the spring of 1910 in the hope of furnishing a satisfactory water supply for the maneuver camp, but the analyses of all of these have shown the presence of the colon bacillus. A new series of examinations has recently been instituted in which great care has been directed in the obtaining of the samples. If these analyses are unsatisfactory it is evident that some form of purification will have to be adopted.

FORT OMAHA, NEBR.

The surgeon, Fort Omaha, reported the water supply furnished by the Omaha Water Company as unfit for drinking purposes, which opinion was sustained by the analysis made in the laboratory of this office. The surgeon calls attention to the fact that artesian water can probably be obtained as there is a well at Miller's Park which yields 150 gallons a minute of excellent water.

FORT ONTARIO, N. Y.

The course of the water is from the Oswego River and is polluted; but the city is about to install a new water supply taken from the lake at a considerable distance from shore which it is hoped will furnish a pure water supply. The analysis of water from two old wells on the reservation showed it to be suspicious in character.

PLATTSBURG BARRACKS, N. Y

A system of mechanical filtration for the water supply of this post has been installed during the year which is reported as being satisfactory.

FORT PORTER, N. Y.

The water supply is from the Niagara River and furnished by the Buffalo City Water Company. It is polluted with sewage and at present Darnall filters are in use in each company and in the hospital. Some more systematic method of purifying the whole supply should be adopted.

FORT STEVENS, OREG.

The water supply is from cisterns which the surgeon reports as being inadequate.

FORT TERRY, N. Y.

The chief surgeon in his report quotes the post surgeon condemning the water supply. The water supply is furnished by distillation, but contains much chlorine, which exerts a most corrosive action upon the water pipes, distilling apparatus, etc. Attempts have been recently made to add to this water supply by sinking a number of shallow wells on the island, the water of the most of which has, on analysis, proved to be of a very satisfactory character.

WATERVLEIT ARSENAL, N. Y.

The water supply of the arsenal is drawn from the Hudson River which is badly contaminated by the sewage of the city of Troy and that of the arsenal itself. Another water supply has been sought by sinking wells on the reservation, but the results of numerous analyses made during the past six months have shown it to be of an unsatisfactory character, so that the question of a pure-water supply for this post is not yet solved.

FORT YELLOWSTONE, WYO.

The water supply is objectionable in summer because of the growth of algæ and decaying water plants. The supply passes through a marshy valley before reaching the post. A new water supply is being constructed, tapping the stream higher up so as to cut out these sources of contamination and render the supply less liable to contamination by wild animals.

FORT DE RUSSY, HAWAII.

The surgeon reports that a considerable portion of the reservation is occupied by ponds, which are stagnant and are prolific breeders of mosquitoes. The commanding officer states that these ponds occupy about 30 out of the 70 acres of the reservation and that the filling in of these ponds would be very expensive, the estimated cost being about $65,000. Congress has already appropriated $50,000 for this purpose. Even if all the ponds are filled in the reservation is bordered with a series of fish ponds and duck ponds which would continue to breed mosquitoes.

KEY WEST BARRACKS, FLA.

The post at Key West was damaged by a hurricane on October 11, 1909, which partially unroofed the hospital and several of the barracks and did serious damage to the pump house which provided water for the flushing of the water-closets and for bathing. The electric lighting system was badly damaged and great havoc was made of the trees and shrubs on the reservation. Prompt steps were taken to repair all these damages.

There was much correspondence during the year about the interference with the main sewer, caused by the filling up of the bay about the sewer outlet during the progress of work carried on by the Florida East Coast Railroad Company. This company is obligated to keep the sewer in order, and it is understood that all damages were finally repaired by it.

SEWAGE PURIFICATION.

The construction of some system of sewage purification has been recommended at Forts McPherson, Logan, Sill, Assiniboine, and McKenzie, in addition to Forts Leavenworth and Sheridan, above mentioned. The conditions are not regarded as urgent at any of these posts, but as appropriations become available some form of biological sewage purification will doubtless be installed at each of them.

SANITARY REPORTS.

A review of the monthly sanitary reports shows many sanitary defects arising from time to time during the year and the value of these reports is constantly illustrated by the promptness with which action is taken to correct the insanitary conditions mentioned in them. Overcrowding was mentioned in a number of posts, the majority of these being garrisoned by the Coast Artillery Corps. At Forts Totten and Adams it is surprising to note that overhead or double-deck bunks, a sanitary abomination which was believed to be obsolete in the United States Army, had reappeared. The overcrowded condition of the barracks at Revere and Adams was noted in my preceding annual report. Overcrowding of guardhouses is probably the sanitary error most frequently noted. It would be very desirable that instructions should be issued that the minimum cubic-air space per capita for guardhouses should be 500 cubic feet and the number of individuals which each guardhouse could accommodate conspicuously posted on the building and general instructions given that this number should, under no circumstances, be exceeded.

Specific instructions in special cases appear to do little good, as the overcrowding of guardhouses at Fort Des Moines and Fort Sill, noted in my last report and made the subject of official correspondence, have been allowed to be repeated.

At Fort Jay, N. Y., in addition to overcrowding, it was noted that many of the prisoners were kept in idleness and had insufficient exercise. Measures were promptly taken to correct these defects. At Fort Porter, in addition to insufficient capacity and defective ventilation of the barracks, it was noted that the foulness of the air was much increased by the use of gas for lighting, and the substitution of electricity as an illuminant was recommended. This recommendation, however, appears not to have been carried out. If, in the cases of this and similar posts, ventilating shafts were placed over the gas burners, instead of being sources of contamination for the atmosphere, they might be made efficient agents for assisting ventilation.

At Fort Worden it was noted that the newly-constructed barracks failed to provide the minimum allowance of cubic feet of air space per capita—720 cubic feet—and in fact after deducting the space occupied by lockers, bunks, etc., the allowance was only 640 cubic feet. The number of men in these barracks was 708 and it was noted by the post commander that the bunks were only a foot apart. While it is realized that the increased cost of construction makes it difficult to bring the cost of barracks within the appropriations allowed, it is thought that economy in fresh air is a grave error which should not be permitted. The importance of abundant fresh air and proper ventilation is discussed under the head of "Tuberculosis."

CAMPS OF INSTRUCTION FOR MILITIA MEDICAL OFFICERS DURING THE SUMMER OF 1909.

The following memorandum from the Surgeon-General's Office of April 23, 1909, received favorable action by the War Department:

It must be recognized that the present methods of instructing militia medical officers leave much to be desired. Maneuvers have been utilized for this purpose, but in the brief period devoted to them, and the many duties which devolve on the militia medical officer at that time, not much can be done in the way of instructing them. In addition to the maneuvers, officers of the Medical Corps have inspected the medical department of the National Guard of New York during the present year and some lectures have been delivered to the medical officers of the National Guard of Massachusetts this year and preceding years. What is needed further, is some scheme which, without seriously interfering with the time of militia medical officers that naturally is much occupied, as most of these gentlemen are in the active practice of their profession, will show them clearly what duties will be expected of them in war.

It is believed that this could best be accomplished by the establishment of a camp by the Medical Department. It is thought that if this camp was open for a period of one or two months during the summer that from time to time a great many national guard medical officers would attend it. If the scheme is approved it is proposed to establish at this camp a complete field hospital and ambulance company which would be used to illustrate the work of these organizations. In addition a comprehensive course of lectures would be given from time to time and free discussion would be permitted to all national guard officers participating. It is thought that if some spot of historical interest in connection with the civil war, such as Gettysburg, were fixed upon as the site of the camp, it would operate to attract the greatest number of national guard medical officers. There would be another advantage in this plan as the field could be used to illustrate what was done by the medical service in the civil war and what would have to be done under modern conditions in warfare. The expense involved in the scheme proposed would not be great. One of the companies of instruction (Hospital Corps), could be utilized for the personnel of the field hospital and ambulance company. Lecturers could come from the Army Medical School. For the company and field hospital the regulation amount of transportation would have to be provided.

There were three camps organized; one at Antietam, Md., one at Sparta, Wis., and one at the Presidio of San Francisco, Cal.

The camp at Antietam, Md., was from July 15 to August 12, inclusive. There were two periods of instruction of practically two weeks each and each day the instruction, which lasted for about seven hours, was devoted to lectures and demonstrations supplemented by some extra time in the preparation of reports and returns. The camp was pitched upon a field of 14 acres close to the junction of the Bloody Lane and Hagerstown Turnpike. There were present at this camp, 11 medical officers of the regular corps, 112 enlisted men, mostly of Company C, Hospital Corps, and some civilian teamsters. Field Hospital No. 6 with its ambulance company section was also used. Maj. Frederick Reynolds, Medical Corps, was in command of the camp and associated with him were 3 captains and 4 lieutenants. Among this number was Capt. Robert N. Patterson, who, in addition to his duties in connection with the camp, assisted in the instruction for the militia medical officers, as also did Major Reynolds.

The instructors and the schedule were as follows:

Hospital corps drill	Capt. R. N. Patterson	8.15 a. m.
Military hygiene	Lieut. Col. W. D. McCaw	9.00 a. m.
The military service in campaign	Maj. P. F. Straub	10.00 a. m.
Administration	Capt. Charles R. Reynolds	11.00 a. m.
Organization, equipment, and duties of the Medical Department in the field.	Maj. Frederick Reynolds	4.00 p. m.

In regard to the work during the afternoon and to some other features connected with the instruction, Major Reynolds has the following to say:

Afternoons were largely devoted to practical field work under Major Straub as instructor. The work began with practice in map reading and was followed by "staff rides," the locating of the aid stations and the routes of evacuation for wounded. The ambulance company was taken out and used in one exercise.

A problem was given on the last day in the solution of which the entire day was devoted, in which the field hospital and ambulance company were used.

The various aid stations of the front were located, the equipment unpacked, the organization of each station completed, and the lines of evacuation established. A discussion of the problem followed.

Upon arrival in camp, student officers below the grade of major were assigned to duty with either the ambulance company or the field hospital, and reported to the commanding officers of these units for instruction. They were thereby enabled to become familiar with the organizations, interior economy, and equipment. These assignments were alternated at the end of the week.

Hospital corps drill was taught by attendance at company inspections and at drills in which all exercises of the drill regulations were covered. Also, a detachment of student officers was drilled by Captain Patterson. At these drills, attendance upon which was voluntary, considerable enthusiasm was shown, the detachment comprising a majority of the student officers. One lecture upon the principles of first aid was given, also two demonstrations of the methods of instructing the Hospital Corps in this subject.

A medical officer of the day was detailed by roster from the class. His duties were to attend sick call and emergencies during his tour, to be present at formations and receive reports of roll calls, to inspect the messes, and to make a complete sanitary inspection of the camp in accordance with a prescribed form.

During the first period of instruction there were 23 medical officers of the militia present, and during the last, 45.

The sanitary conditions were excellent, there being only 5 cases taken upon sick report in July and 4 in August, these being as follows: Diarrhea, 4; pleurisy, acute, 1; lacerated wound, 1; abscess, 1; appendicitis, 1; pulmonary tuberculosis, 1.

McCall incinerators were used and all excreta disposed of by them. Night urine tubs were used in company streets. Manure was taken away and deposited on farm land. Most of the garbage was removed by a civilian, the remainder was burned.

At the beginning of camp a rock crematory was built, and in order to demonstrate its efficiency all manure and garbage were destroyed in it. During the latter part of the period a kitchen "spider incinerator" or crematory was built, similar to those at encampments of the Pennsylvania Militia. While it was not used to a sufficient extent to demonstrate its capability of destroying all wastes of a company kitchen, it seemed to be the opinion of medical officers who saw it in operation that it could readily accomplish this work. It required no more care than does a company range, and besides destroying garbage it evaporates a considerable quantity of liquids, probably all that a company kitchen should have.

Of the course of instruction, Lieut. Col. W. D. McCaw has the following to say:

The course of instruction given to the visiting officers, although of necessity rather experimental in its nature, turned out to be very well adapted to their needs, and there was but little repetition of subject-matter by the different instructors. I, as chief instructor, opened up the session each morning by a lecture on the hygiene of field service, and was followed by Major Straub, who lectured upon the use of the Medical Department in field service. Capt. C. R. Reynolds then lectured on the most important regulations applicable to field service and demonstrated the essential papers necessary, particularly those pertaining to the drawing and use of rations in the field, and the keeping of records of sick and wounded. Major Reynolds lectured at different times on the internal administration of field hospitals and ambulance companies. On Saturdays complete inspections of the camp and the sanitary appliances were held. In the afternoon maneuvers were carried out, in which as many of the militia officers as possible were mounted, the rest traveling in ambulances. This course, conducted by Major Straub, was exceedingly original and instructive in its nature. It consisted at first of several preliminary expeditions for the purpose of teaching map reading. The class was required to follow their course on the map, taking notes of all roads and contours, and estimating distances and direction. In a few days they had become expert enough to locate their positions on the battle field by making sketch maps. Later on expeditions were made with the ambulance company, and once during each day the entire field hospital allowed by present regulations was packed on the regulation number of wagons and a battle problem was undertaken. A line of battle was assumed advancing on certain ground, and certain specified losses were assumed for the different organizations. The militia officers were given these conditions, and assigned to certain positions with the assumed army, were required to go out and locate their medical organizations according to their own judgment, reporting their whereabouts on maps of their own making. The defense of their judgment of locality was a part of the discussion which was held in camp the next day.

Of the entire success of the camp from the standpoint of the militia officers there can be no possible doubt. Their enthusiasm was so great at all times as to be almost embarrassing to the regular officers.

All the medical officers, both regular and militia, were apparently very much benefited by the work of the camp.

The objectionable features were, first, the limited number of mounts, there being only 45, so that in the last class all the militia officers could not be mounted; second, the limited number of hospital corps men, it being found that several noncommissioned officers and about 20 privates were needed for camp administration, police, and sanitary work, and could not be drawn from the field hospital and ambulance company detachment, as these units would be left undermanned and incapable of performing their duties.

Camp Robinson, near Sparta, Wis., was under the command of Maj. Powell C. Fauntleroy. The instructors were—

1. Practical instruction in field work with demonstrations: Maj. Powell C. Fauntleroy.
2. Military hygiene: Maj. William E. Purviance.
3. Army regulations: Maj. Thomas S. Bratton.

The following medical officers were associated in the administration of the camp and in the work of instruction: Capts. Fred A. Dale, Clement C. Whitcomb, Edward M. Talbott; Lieuts. Harold W. Jones, Charles E. Doerr, Thomas J. Leary, Rozier C. Bayly.

Company A, Hospital Corps, and Field Hospital No. 4, with its ambulance company section, were also assembled here.

The first period of instruction was from July 15 to July 28 and was attended by 40 medical officers of the militia, while 30 attended the second, from July 29 to August 12.

At the Presidio of San Francisco, Cal., the camp was under the command of Maj. Albert E. Truby, Medical Corps. The instructors were—

Field work: Maj. Albert E. Truby.

Regulations: Maj. Joseph H. Ford.

Military hygiene: Maj. Arthur W. Morse.

The following medical officers were associated in the administration of the camp and in the work of instruction: Capts. Herbert G. Shaw, James L. Bevans, Robert L. Carswell, William A. Wickline; Lieuts. Daniel P. Card, Robert W. Kerr, William S. Shields.

Company B, Hospital Corps, with 116 enlisted men and a field hospital with its ambulance company section, were assembled here.

The first period of instruction was from July 15 to July 29, and as no medical officers of the militia reported, the company was employed with various drills and maneuver problems. The second period, from July 29 to August 12, was attended by 12 medical officers of the militia.

In both of these camps excellent courses of instruction were given, the outlines being in each case left to the individual instructors. In each case every effort was made to make the work as interesting and as practicable as possible. The general opinion expressed by all of the medical officers who attended, both of the regular corps and of the militia, was that the camps had been very successful and that all who attended had been benefited.

At the various maneuver camps during the summer and fall of 1910, similar courses of instruction for the medical officers of the militia will be given, especial time and attention being devoted to "Field work and problems," as was the case last year.

ALASKA.

The mean strength of the troops serving in Alaska was about the same as last year, consisting of infantry, Signal Corps, and Hospital Corps, in all 1,064 men, all white.

The noneffective rate and average number of days lost were greater than for the preceding year, although the admission rate was less. There were only 2 deaths, both from drowning. Six men were invalided home, of whom 5 were discharged for disability, 4 on account of injuries and 1 for chronic alcoholism.

The principal causes of admission were venereal diseases, alcoholism, tonsillitis, and rheumatism. The infectious fevers were noticeably absent, no case being reported of typhoid fever, smallpox, measles, scarlet fever, or diphtheria.

Alaska still maintains its position as by far the healthiest region where the army is stationed.

TABLE NO. 30.—*Influence of station, year 1909, Alaska.*

	Mean strength.	Ratios per 1,000 of mean strength.										Average number of days lost.			
		Admissions to sick report.		Discharges on surgeon's certificate of disability.		Deaths.		Total losses.		Noneffective from sickness.				From all causes.		Excluding injuries, venereal diseases, alcoholism, and vaccinia.	
										From all causes.		Excluding injuries, venereal diseases, alcoholism, and vaccinia.					
		From all causes.	Exclusive of injuries, venereal diseases, alcoholism, and vaccinia.	From all causes.	Exclusive of injuries, venereal diseases, alcoholism, and vaccinia.	From all causes.	Exclusive of injuries, venereal diseases, alcoholism, and vaccinia.	From all causes.	Exclusive of injuries, venereal diseases, alcoholism, and vaccinia.	Total.	In hospital.	Total.	In hospital.	For each soldier.	For each case.	For each soldier.	For each case.
Fort Gibbon	255	250.98	160.78	3.92	.....	.....	.....	3.92	.....	13.96	11.73	7.39	6.53	5.09	20.30	2.70	16.78
Fort St. Michael	146	273.97	136.99	.....	.....	.....	.....	.....	.....	14.52	13.81	5.85	5.57	5.30	19.35	2.14	15.60
Fort Liscum	181	386.74	226.52	.....	.....	5.52	.....	5.52	.....	24.29	22.01	14.00	13.74	8.87	22.93	5.11	22.56
Fort Davis	148	459.46	243.24	.....	.....	6.76	.....	6.76	.....	9.00	6.52	3.31	1.70	3.28	7.15	1.21	4.97
Fort Egbert	145	510.34	241.38	20.69	.....	.....	.....	20.69	.....	21.24	16.29	7.69	5.71	7.75	15.19	2.81	11.63
Fort William H. Seward	189	523.81	259.26	5.29	.....	.....	.....	5.29	.....	14.66	13.32	6.35	5.73	5.35	10.21	2.32	8.94
Total	1,064	390.04	208.65	4.36	.....	1.75	.....	6.11	.....	16.22	13.94	7.59	6.70	5.92	15.18	2.77	13.28

TABLE NO. 31.—*Influence of season, year 1909, Alaska.*

Month.	Mean strength.	Ratios per 1,000 of mean strength.								Prevailing diseases (exclusive of venereal diseases, etc.).
		All causes.					Exclusive of venereal diseases, alcoholism, vaccinia, and injuries.			
		Admissions.			Noneffective.					
		Total.	Hospital.	Deaths.	Total.	Hospital.	Admissions.	Deaths.	Noneffective.	
Jan	1,070	28.04	22.43	.....	13.84	12.09	13.08	....	8.05	Tonsillitis, 5.
Feb	1,064	26.32	21.62	.....	15.41	14.20	15.98	...	7.01	Muscular rheumatism, 3.
Mar	1,064	28.20	25.38	.....	19.13	18.31	19.74	....	11.73	Do.
Apr	1,065	24.41	18.78	.....	16.93	14.27	12.21	....	9.36	Do.
May	1,062	21.66	18.83	.....	13.82	13.03	16.95	....	6.80	Articular rheumatism, acute and chronic, 3; muscular rheumatism, 3.
June	1,057	20.81	10.41	0.89	10.34	7.25	8.51	....	4.01	
July	1,072	17.72	11.19	.....	9.09	7.55	11.19	....	3.97	
Aug	1,057	35.95	27.44	.87	11.81	10.22	15.14	....	5.68	
Sept	1,078	38.03	27.83	.....	16.30	14.01	19.48	....	6.99	Furuncles, 5; tonsillitis, 3; constipation, 3.
Oct	1,068	54.30	37.45	.....	21.60	17.49	26.22	....	7.22	Muscular rheumatism, 4; diarrhea and enteritis, 3; coryza, 3.
Nov	1,059	35.88	31.16	.....	19.29	16.40	17.00	....	7.90	Tonsillitis, 3.
Dec	1,049	59.10	42.90	.....	27.12	22.54	33.36	....	12.36	Tonsillitis, 6; trachoma, 4; acute bronchitis, 3.
Total	1,064	390.04	295.11	1.75	16.22	13.94	208.65	....	7.59	Tonsillitis and other diseases of the pharynx, 33; muscular rheumatism, 25; articular rheumatism, acute and chronic, 14; constipation, 12.

CUBA.

The army of Cuban occupation was withdrawn from the island early in the year, the last troops leaving on the 1st of April. Its strength was about 4,000 officers and men. The health of the troops during this period was excellent and their sanitary history contains little worthy of note. Their admission, death, and noneffective rates were all markedly better than those of the troops having station in the United States. After venereal diseases, malarial fevers and intestinal parasites were the principal causes of admission to sick report. No case of yellow fever occurred, as that disease had been extinguished on the island. The causes of morbidity are given in detail in Table No. 64. The invalided home is shown in the following table:

TABLE No. 32.—*Enlisted men invalided home from Cuba, year 1909.*

Cause.	Number of cases.	Percentage of total cases.	Duty.	Discharged on surgeon's certificate of disability.	Otherwise disposed of.
Venereal diseases	10	32.26	8	2	
Fractures, exclusive of gunshot	3	9.68	3		
Tuberculosis	2	6.45	1	1	
Other chronic poisonings	2	6.45		2	
Neuralgia	2	6.45	1		1
Other diseases of the intestines	2	6.45	2		
Congenital malformations	2	6.45		2	
Chronic alcoholism	1	3.23		1	
Chronic lead poisoning	1	3.23		1	
Organic disease of the heart	1	3.23		1	
Pleurisy	1	3.23	1		
Abscess of the liver	1	3.23	1		
Appendicitis	1	3.23	1		
Chronic nephritis	1	3.23		1	
Undetermined fever	1	3.23	1		
Total cases	31	100.00	19	11	1
Percentage of total cases			61.29	35.48	3.23

PORTO RICO.

There are in Porto Rico two military posts—San Juan at the capitol, and Henry Barracks in the interior—both garrisoned by the Porto Rican Regiment. The mean enlisted strength for 1909 was 567. The enlisted strength of this regiment is recruited from native Porto Ricans, the officers being in part Americans and in part Porto Ricans.

The movement of sick is shown in the following table, which gives also the rates for the preceding year for the purpose of comparison:

TABLE No. 33.—*Movement of sick, Porto Rican Regiment, year 1909.*

	Years.	From all causes.		Excluding injuries, venereal diseases, vaccinia, and alcoholism.	
		Total.	In hospital.	Total.	In hospital.
Ratio per 1,000 of mean strength:					
Admissions to sick report	1909	1,188.71	1,135.80	832.45	
	1908	1,242.91	1,102.84	918.44	
Discharges on surgeon's certificate of disability	1909	10.58		5.29	
	1908	7.09		7.09	
Deaths	1909	12.35		7.05	
	1908	7.09		5.32	
Total losses	1909	22.93		12.34	
	1908	14.18		12.41	
Noneffective	1909	43.03		23.80	23.00
	1908	37.02	34.40	22.78	20.73
Average number of days lost:					
For each soldier	1909	15.71	15.17	8.69	8.39
	1908	13.55	12.59	8.34	7.59
For each case	1909	13.21	13.35	10.43	
	1908	10.90	11.42	9.08	

It will be seen that the admission rate was somewhat smaller than for the preceding year, but the noneffective rate is somewhat greater. The discharge and death rates were also greater than for last year, the former being less and the latter greater than the rates for the whole army.

Table No. 34 gives the rates for the prevailing diseases, from which it will be seen that there is a slight increase in venereal diseases, which have a considerably higher rate than for the army. The rate for malaria shows a marked reduction. The increase in filarial infections is notable, thirteen cases of this serious infection having been reported.

TABLE NO. 34.—*Diseases of Porto Rican troops—Admission rates per 1,000 of mean strength.*

	Year 1909.	Year 1908.
Venereal diseases	250.44	242.91
Gonorrhea and results	126.98	143.62
Chancroid and results	89.95	69.28
Syphilis and results	33.51	39.01
Malaria	179.89	219.86
Furuncle	109.35	78.01
Influenza	82.89	83.33
Dyspepsia	49.38	62.06
Bronchitis, acute and chronic	29.98	19.50
Filariasis	22.93	3.55
Measles	17.64	19.50
Dysentry	14.11	15.96
Ankylostomiasis	8.82	14.18
Rheumatism, acute, articular	8.82	5.32
Typhoid fever	5.29	5.32
Smallpox	3.53	7.09
Tuberculosis, all	3.53	1.77
Insanity	3.53	1.77

The following table shows the seasonal prevalence of the prevailing diseases for each month:

TABLE NO. 35.—*Influence of season, year 1909, Porto Rico.*

Month.	Mean strength.	Ratios per 1,000 of mean strength.								Prevailing diseases (exclusive of venereal diseases, etc.).
		All causes.					Exclusive of venereal diseases, alcoholism vaccinia, and injuries.			
		Admissions.		Deaths.	Noneffective.					
		Total.	Hospital.		Total.	Hospital.	Admissions.	Deaths.	Noneffective.	
Jan	568	89.79	84.51	1.76	29.93	29.02	68.66	.....	15.90	Malarial fever, 21; furuncles, 5.
Feb	567	56.44	49.38	.....	27.49	26.21	40.56	.....	14.72	Malarial fever, 6.
Mar	566	132.51	128.98	.....	39.09	37.49	95.41	.....	28.16	Malarial fever, 8; acute bronchitis, 8; furuncles, 5.
Apr	564	67.38	56.74	1.77	40.01	38.77	42.55	1.77	29.55	Malarial fever, 7.
May	570	91.23	84.21	.....	38.21	36.74	73.68	.....	24.89	Malarial fever, 9; furuncles, 6.
June	551	87.11	87.11	1.81	44.22	41.08	59.89	1.81	29.40	Malarial fever, 9.
July	559	119.86	118.07	.....	41.70	39.80	84.08	.....	30.64	Malarial fever, 11; furuncles, 7.
Aug	571	99.82	99.82	1.75	45.59	45.59	47.29	.....	19.87	Furuncles, 7.
Sept	571	98.07	96.32	.....	50.08	50.03	75.31	.....	24.11	Furuncles, 11; malarial fever, 7; dyspepsia, 6.
Oct	572	124.13	115.38	.....	52.28	49.99	73.43	.....	23.93	Malarial fever, 8; furuncles, 8.
Nov	574	106.27	104.53	1.74	55.28	54.65	80.14	1.74	22.30	Influenza, 14; malarial fever, 13.
Dec	574	114.98	109.76	3.48	41.81	38.98	90.59	1.74	16.71	Influenza, 23.
Total	567	1,188.71	1,135.80	12.35	43.03	41.55	832.45	7.05	23.80	Malarial fever, 102; furuncles, 62; dyspepsia, 28; acute bronchitis, 17; diarrhea and enteritis, 17; filiariasis, 13.

The highest admission rate was in March and the lowest in February, the highest noneffective rate being in November and the lowest in February. There were 7 deaths, due to the following causes: Acute myelitis, 1; typhoid fever, 1; appendicitis, 1; abscess of left lung, 1; drowning, 1; fracture of the skull, 1; and gunshot wound, 1.

RECRUITING.

Seventy per cent of the recruits examined by medical officers were accepted, as compared with 80 per cent for 1908. Forty-five per cent of the accepted candidates were between the ages of 21 and 25, inclusive, and only 4 candidates were under 21. Sixty-one per cent were 66 inches or under in height, and only 4 reached the height of 5 feet 11 inches or over. Seventy-six per cent of recruits were under the average height of the American recruits, viz, 67.56 inches. Forty-eight per cent weighed less than 130 pounds, and only 9 per cent weighed 150 pounds or over. Sixty-three per cent had a chest measurement of 33 inches or under, and 14 per cent had chest measurements of 35 inches or over, as compared with 17 per cent for last year.

REJECTIONS.

TABLE NO. 36.—*Causes of rejection of applicants for enlistment, Porto Rican Regiment, year 1909.*

	Total.	
	Number.	Ratio per 1,000 rejected for physical causes.
Under weight	16	160.00
Diseases of the eye, including defects of vision	12	120.00
Diseases of the genito-urinary system, nonvenereal	12	120.00
Chest development insufficient	9	90.00
Heart disease	8	80.00
Venereal diseases	7	70.00
Hernia	7	70.00
Varicose veins, except as shown in detail	5	50.00
Hemorrhoids	4	40.00
Defective teeth	4	40.00
Diseases of the skin	4	40.00
Curvature of the spine	4	40.00
General diseases, except as shown in detail	3	30.00
Diseases of the respiratory system	3	30.00
Diseases of the nervous system, except as shown in detail	1	10.00
Under height	1	10.00
Total	100	1,000.00

Sixteen per cent of the rejections were caused by deficiency in height, 12 per cent for diseases of the eye, 12 per cent for diseases of the genito-urinary system, nonvenereal; 9 per cent for insufficient chest development, 8 per cent for heart diseases, and 7 per cent for venereal diseases. For 1908 venereal diseases were a larger factor, causing 10 per cent of the rejections.

HAWAII.

Only one island of the Hawaiian group is garrisoned, namely, Oahu, on which is situated the city of Honolulu. As the garrison is being largely increased, the station has become one of considerable importance. The mean strength of the garrison during the year was 1,014. In spite of its salubrious and temperate climate and the absence of the more serious epidemic diseases, its admission and noneffective rates were higher than for the United States. This is owing to high rates for venereal diseases, the intestinal diseases, and furunculosis. There were 10 cases of typhoid fever during the year. It is surprising to find the admission rate for bronchitis and tonsillitis higher in this delightful climate than for Alaska. Twenty-nine men were invalided home, of whom 8 were returned to duty, 10 were discharged for disability, 4 otherwise disposed of, and 7 remained under treatment at the end of the year. The total number of discharges for disability during the year was 15. There were 2 deaths, one from typhoid fever, the other from accidental fracture of the skull.

PHILIPPINE ISLANDS.

AMERICAN TROOPS.

The health of the American troops in the Philippines continues to improve year by year. As shown in Table No. 3, the admission rate for disease and the constantly noneffective rate were better for 1909 than for 1908, which was in turn better than for any preceding year. The death rate was, both for disease and external cause, lower than in 1908. Among the deaths from external causes, there were 20 deaths from wounds, as for the preceding year; for fractures, exclusive of gunshot, 3; and for drowning, 2. Of the deaths from wounds, there were 4 killed in action and 2 died of wounds received in action.

The mean strength of the American troops was 13,760, not including a force of native troops, the Philippine Scouts, with a mean strength of 5,534, for whom medical statistics will be given separately on page 104. The most important diseases showing a reduction are malarial fevers, diarrhea and enteritis, alcoholism, tuberculosis, Asiatic cholera (none for 1909, compared with 13 for 1908), and variola (none). On the other hand, there was an increased admission rate for typhoid fever, dysentery, dengue, and venereal disease. The diseases causing the highest noneffective rates were: Venereal diseases, 21.15; malarial fevers, 2.42; dysentery, 2.99; and dengue, 2.30. The principal causes of death were (absolute numbers) gunshot wounds 16, dysentery 14 (amœbic 3, bacillary 6, mixed infections and other dysentery 5), organic diseases of the heart 8, tuberculosis 6, wounds other than gunshot 4. It should be noted that deaths occurring in the United States from disease contracted in the Philippines are credited in this report to the station of the regiment or organization to which the soldier belonged. Thus of the 6 deaths from tuberculosis credited to the Philippines only 2 actually occurred there, the balance being among soldiers invalided home on account of that disease. No case of snake bite was reported. There were 2 deaths from drowning, as against 13 for 1908.

PREVALENCE OF SPECIAL DISEASES.

TYPHOID FEVER.

The admission rate was 6.15, as compared with 2.76 for 1908, with 2 deaths, as against 5 for the preceding year. The rate was higher than for the army as a whole, that being 3.59. This large rate and the increase over the preceding year is to be accounted for by the two outbreaks, one of which occurred at Camp Eldridge, Laguna, P. I., lasting from July 3 to October 24, 1909. There were 10 cases with no deaths. The second and more extensive outbreak occurred in the Twenty-third Infantry at Ludlow Barracks, Parang, P. I., which began October 11, 1909, and continued until some time in the present year, 1910. From the beginning of this outbreak until March 15 there occurred 74 cases with 2 deaths. This epidemic was carefully investigated in October, 1909, by the post surgeon, Major Henry Page, assisted by Capt. James M. Phalen, president of the tropical board. The conclusion arrived at was that in all probability the epidemic was caused by the use of unsterilized water for bathing and the unauthorized use for drinking and washing the teeth. It was also proven that at least one table waiter had on several occasions used the unsterilized water from the taps in diluting the tea served to the men. The epidemic was largely confined to five companies and the fixtures for running water, which were unsterilized, were first placed in these companies. Distilled water was provided for drinking and washing the teeth and notices had been posted and orders issued warning the men against the use of tap water for these purposes. However, it was shown that many of them had disregarded all orders and warnings upon this subject.

This epidemic was further carefully investigated by Capt. H. G. Bloomburg, of the tropical board, assisted by the post surgeon, during the latter part of March, 1910. The conclusions arrived at were as follows:

(1) From the two investigations it seems safe to assume that the Nituan River water (piped throughout the post) was a badly infected water and doubtless at times contained typhoid organisms excreted by natives sick with the disease. The Moros, as a result of religious teaching, defecate directly into running water.

(2) Major Page's report states that many soldiers acknowledged having drunk the unboiled tap water, and one assistant cook admitted having frequently diluted the company iced tea with this water. We believe this water was the source of some of the cases of typhoid fever, particularly the scattered and early cases.

(3) The case maps of the post for the first part of the epidemic and for the recrudescence show the distribution of the cases to have been a little more general in the latter, but considering both outbreaks as a whole the cases were so notably grouped in the barracks of Companies D, E, I, K, L, and M that we believe the facts are consistent with the hypothesis of contact infection, especially of food during preparation and serving, having been an important factor in the spread of the epidemic. At this date, however, we are unable to positively exclude the possibility of a temporary infection of the water having caused the flare-ups.

(4) The theory which had been advanced that the grouping of the October cases in D, I, K, L, and M barracks was due to the piped Nituan water having been first introduced into those buildings (fall of 1909) is attractive, but we believe must remain open to doubt because of the subsequent course of the epidemic and the vague and contradictory statements obtained as to the dates and order of installing the water connections.

(5) The attempt to trace the infection to carriers was not successful.

The Twenty-third Infantry was removed about March 15 of the present year and the post was then garrisoned by the Twenty-first Infantry. During a period of more than three months since the arrival of this regiment at the post only one case of typhoid fever has developed. This seems to demonstrate rather clearly that contact, as pointed out in Captain Bloomburg's report, must have played a very important part in the continuous epidemic of typhoid in the Twenty-third Infantry while at this post.

It is now the general opinion among the medical officers serving in the Philippines that typhoid fever is very prevalent among the native population.

TABLE NO. 37.—*Typhoid fever, American troops, Philippine Islands, year 1909.*

Posts.	Mean strength.	Admissions.	Deaths.
Parang, Mindanao	780	53	1
Camp Eldridge, Luzon	186	10	.....
Malabang, Mindanao	388	4	.....
Fort Mills, Luzon	637	2	.....
Cuartel de Espana, Manila	565	2	.....
Fort William McKinley, Luzon	2,620	2	.....
Camp Jossman, Guimaras	484	1	.....
Camp Overton, Mindanao	359	1	.....
Camp Downes, Leyte	304	1	1
Camp Stotsenburg, Luzon	844	1	.....
Camp McGrath, Luzon	778	1	.....
Field, Mindanao	95	1	.....
Total	12,844	79	2

MALARIAL FEVERS.

The admission ratio for all fevers of this class was 112.35, as compared with 123.97 for 1908, 167.79 for 1907, 304.20 for 1906, and 261.55 for 1905. Malaria stands fourth among causes of admission for all troops, fifth for Americans, and first among Filipino troops. The rate for the army as a whole was 38.42. This continued improvement is to be ascribed to the steps taken to protect the men at night from the bites of anopheles mosquitoes and doubtless also to the measures taken to destroy the breeding places near the garrisons and to the screening of barracks and quarters wherever practicable.

UNDETERMINED FEVERS.

The admission rate for these fevers was 25.46, as compared with 25.31 for last year. The various diagnoses under this head are as follows:

Febricula	183
Fever, simple continued	103
Fever, type undetermined	13
Ephemeral fever	23
Thermic fever	5
Total	327

CHART 8.—*Showing the relative admission, death, and noneffective ratios per thousand of mean strength for certain special diseases in the Philippine Islands (American troops).*

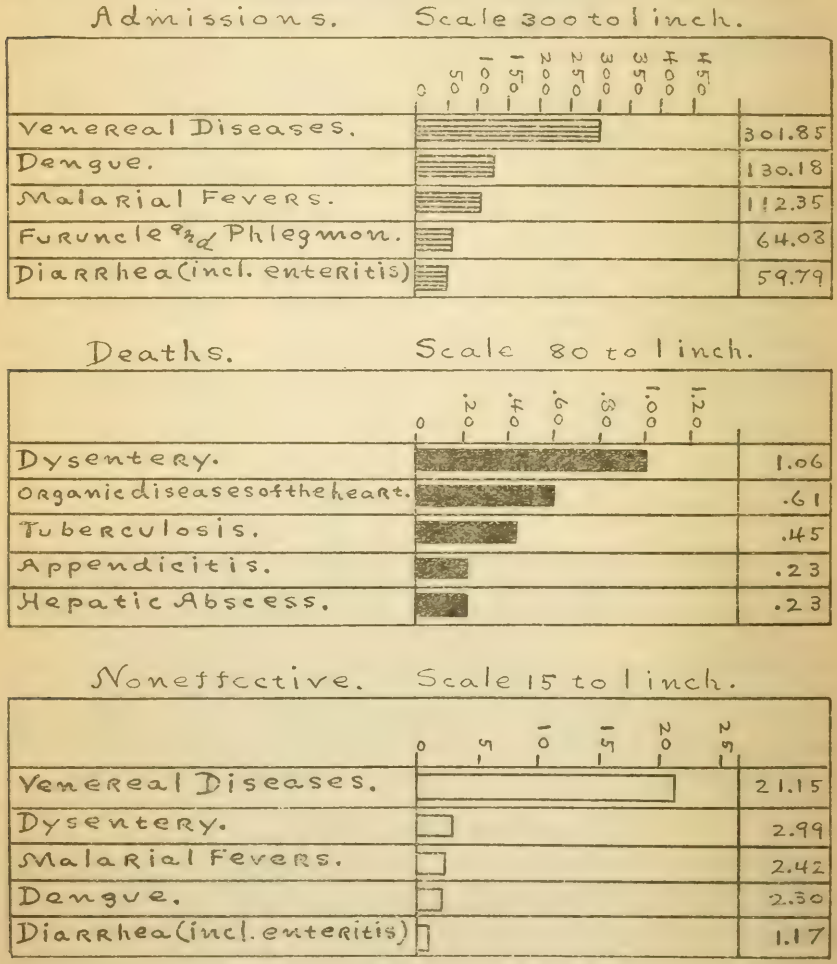
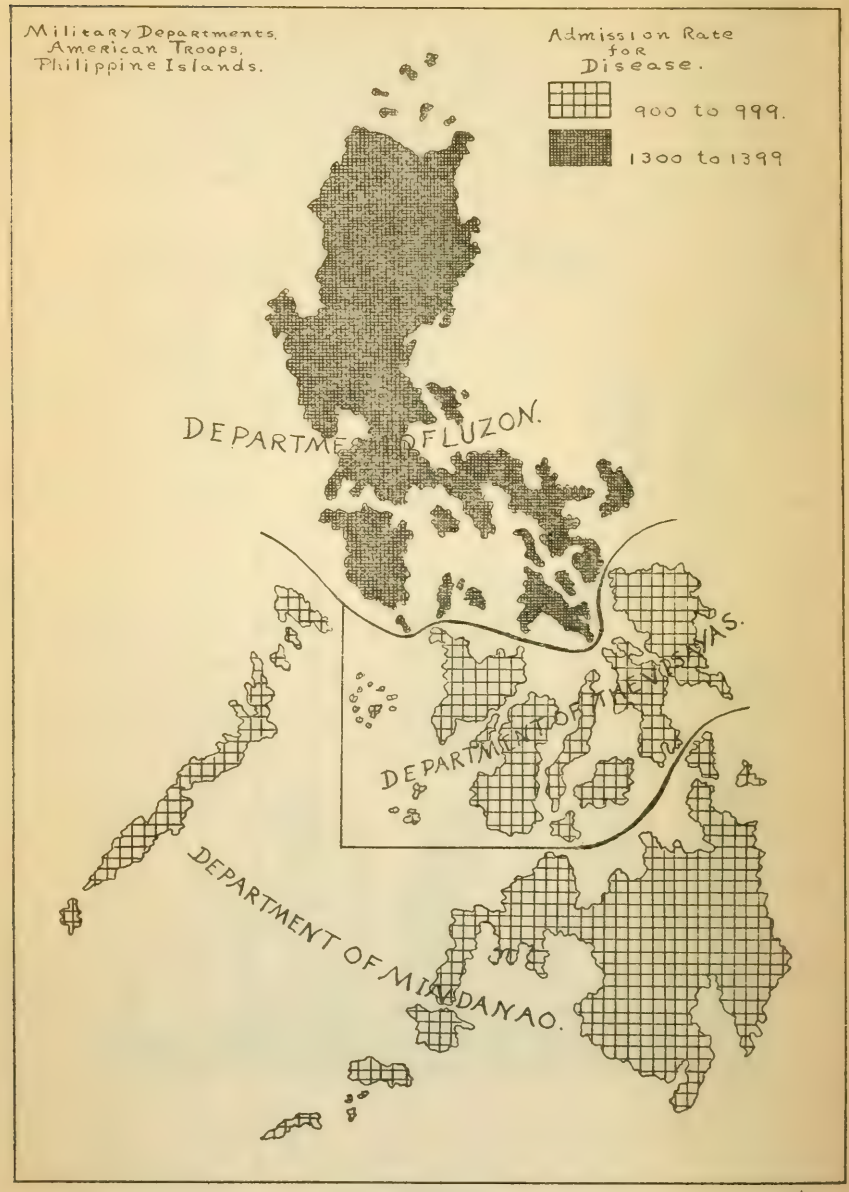


CHART T.—*Showing the relative admission and death rates per thousand of mean strength for malarial diseases in the Philippine Islands (American troops), by years, 1898–1909.*


Military Departments,
American Troops,
Philippine Islands.
Admission Rate
for
Disease.
900 to 999.
1300 to 1399
DEPARTMENT OF LUZON.
DEPARTMENT OF VISAYAS.
DEPARTMENT OF MINDANAO.

ASIATIC CHOLERA.

This disease has been especially prevalent throughout the Archipelago during the past year, and at the present time is still prevalent. The records of the bureau of health show 8,055 cases in the provinces during the year, with 5,524 deaths. This probably does not represent the majority of the cases actually occurring, as the natives conceal cases whenever possible. From January 1, 1909, to December 25, 1909, there were 263 cases confirmed in the city of Manila, with 211 deaths. It is, therefore, gratifying to be able to report that there was no case of cholera among the American troops and but 9 cases, with 7 deaths, among the native troops. In numerous towns adjacent to military posts this disease was epidemic at some period during the year. In the town of Zamboanga, Mindanao, P. I., there were 121 cases, with 89 deaths, among the native population from June 23 to October 18, 1909.

The following is a quotation from the report of this epidemic by Maj. Jere B. Clayton, Medical Corps:

The first 4 cases were reported from Caua Caua, June 23, the victims being Moros. Of these, 3 proved fatal after a duration of only a few hours. Such a high mortality seemed suggestive of an intensely virulent type of infection. This, together with the proverbial disregard of the Moro of personal hygiene, the abject squalor and filth under which he lives, his utter indifference to even a modicum of care or cleanliness in the preparation of his food, or to the character and quality of his food, being often content with tainted fish and semiputrid offal, bespoke an outbreak of serious proportions among an element comprising more than one-sixth of the total population of this community.

In view of the facility with which these people might conceal cases, if they cared to do so, thus largely nullifying the work of the health authorities, it was found necessary to deal with them only with the utmost diplomacy and tact. And it was for this reason that, out of respect for their religious prejudices, as well as to gain their cooperation and good will, no post-mortem examinations of Moro subjects were made.

Fortunately, however, but few other cases occurred among them. One man was found on the beach, near constabulary headquarters, in a dying condition, September 7. Subsequently another case brought consternation to many, especially to Americans, on account of its having occurred in one of the stalls of the Moro exchange, where various popular foodstuffs are sold (September 8).

This afforded opportunity for a thorough renovation and disinfection of the building and its premises, which made it essential to close the same for a period of four days, during which time 47 people were held in strict quarantine. As an additional precaution, certain food substances, such as green fruits and vegetables, as well as a considerable quantity of dried fish, were destroyed. From this, however, no loss accrued to the vendors, as they were promptly reimbursed by the government.

According to the records of this office, which are the outcome of the most careful and painstaking investigation and therefore believed to be accurate, there were, in all, only 11 cases, with 6 deaths, among Moros—a fact as surprising as it is gratifying.

Meanwhile, cholera had made its first appearance for the season among the Filipinos, a number of cases having been reported July 15 from that section of the city known as Tetuan.

The situation had by this time developed the usual quota of self-wise carping critics, even among the most intelligent classes, who, restive under what they chose to term the "unwarranted" and "unnecessary" restrictions imposed upon them by this office, published broadcast all manner of groundless and harmful reports, with a view to minimizing the seriousness of the situation as well as thwarting the plans of the health authorities. It was loudly proclaimed that the "prevailing malady" was not cholera; that it was not transmissible; that it was merely a stomach and intestinal trouble which appeared each year coincidentally with the marketing of certain green fruits, such as mangoes, and that there was no occasion for alarm.

While the health officer was convinced, from the clinical manifestations alone, of the true nature of the disease, yet, in order to remove all possibility of doubt, a post-mortem examination was made in the case of the first Filipino fatally attacked, and a positive conclusion reached through laboratory methods of diagnosis. This should have convinced the most skeptical, if willing to be convinced.

The absence of this disease among American officers and enlisted men and their families under such circumstances is excellent proof of the thoroughness and effectiveness of the sanitary measures employed. The Americans have been thoroughly imbued with the importance of abstaining from eating uncooked native vegetables and of using only sterilized water for drinking.

DYSENTERY.

The occurrence of this disease shows a marked increase over the rate for 1908, being 43.06 as compared with 26.23. It was also slightly higher than the rate of 42.23 for 1907. The proportion of amœbic to bacillary infection was 1.58 to 1 as compared with 3.31 to 1 for 1908 and 17 to 1 for 1907. The actual number of amœbic was 238 as compared with 149 for 1908 and 369 for 1907, while for the bacillary type there were 150 cases as compared with 45 for the year before. A severe epidemic of dysentery, principally bacillary, Shiga type, occurred at Camp McGrath, Batangas, there being 97 cases with 5 deaths, including officers and civilians. The prevalence of dysentery throughout the islands during the year is mentioned under another heading.

DENGUE.

There were 1,672 admissions as compared with 1,162 for the preceding year. As this disease caused only 1 death, and had a small constant noneffective rate, it constitutes rather an inconvenience than a sanitary danger.

BERIBERI.

Two cases of beriberi occurred in white soldiers during the year and no deaths. There was 1 case in 1908. Beriberi occupied the fourth place among causes for admission for the native troops, being 558 with 12 deaths. The new theory in regard to the causation of beriberi, with measures taken to prevent its occurrence, is discussed under the subject of the tropical board.

LEPROSY.

One case of leprosy developed during the year in a private of the Twenty-sixth Infantry stationed at the Cuartel de Espana, Manila, P. I.

TUBERCULOSIS.

The admission rate for all forms of tuberculosis was 5.06, being somewhat less than 6.18 for the preceding year. The rate for the white troops was 4.96 as compared with 6.04 for the colored.

VENEREAL DISEASES.

The first place among causes for admissions is still occupied by venereal diseases. They constitute more than one-sixth of the total number of admissions for diseases; nearly 94 per cent of the admissions

for this cause for all troops were from American troops. The rate was higher than 289.62 for 1908, being 301.85. It was 290.29 for white and 418.46 for colored troops. Among the Filipino troops it occupied the sixth place only, this marked difference doubtless being a result of the fact that a majority of the native soldiers are married. Over one-third of the total number of days lost were incurred not in line of duty, due almost entirely to venereal causes.

ALCOHOLISM.

The admission rate for alcoholism was 22.19, somewhat less than 25.31 for 1908 and 29.23 for 1907. The rate for white troops was 23.53 and for colored 8.63.

INSANITY.

The admission rate for insanity was 1.56 as compared with 1.09 for 1908. The rate for white troops was 1.54 and for colored 1.73. In the United States the rate was 1.63, so that apparently there is not sufficient data for believing, as is generally done, that insanity is more prevalent among troops serving in the Philippines than in those serving in the United States.

DIARRHEA AND ENTERITIS.

The admission rate for these diseases was 59.79, as compared with 85.21 for 1908, 72.43 in 1907, and 130.69 for 1906.

TOTAL RATE FOR DISEASES AND EXTERNAL CAUSES.

The total rate for admissions for all diseases was 1,156.49, which was a little lower than 1,207.84 for 1908. The rate for external causes was also lower, being 191.53 as compared with 231.81 for 1908. The total rate for all diseases and external causes for 1909 was 1,348.02, and for 1908 it was 1,439.65. In the United States the rate for all diseases was 821.77; for all external causes, 202.59; total for all causes, 1,024.37.

INFLUENCE OF STATION.

AMERICAN TROOPS.

The Department of Luzon had the highest admission rate and the Department of Mindanao the lowest. For deaths, the Department of Mindanao had the highest rate and Visayas the lowest. For total noneffective rate from sickness, Luzon has the highest, Mindanao the lowest, while Luzon has the highest average for the number of days lost and Visayas the lowest.

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TABLE NO. 38.— *Movement of sick American troops in the Philippines.*

Department and Island.	Mean strength.	Ratios per 1,000 of mean strength.												Average number of days lost.			
		Admissions to sick report.		Discharged on surgeon's certificate of disability.		Deaths.		Total losses.		Noneffective from sickness.				From all causes.		Excluding injuries, venereal diseases, vaccinia, and alcoholism.	
										From all causes.		Excluding injuries, venereal diseases, vaccinia, and alcoholism.					
		From all causes.	Excluding injuries, venereal diseases, vaccinia, and alcoholism.	From all causes.	Excluding injuries, venereal diseases, vaccinia, and alcoholism.	From all causes.	Excluding injuries, venereal diseases, vaccinia, and alcoholism.	From all causes.	Excluding injuries, venereal diseases, vaccinia, and alcoholism.	Total.	In hospital.	Total.	In hospital.	For each soldier.	For each case.	For each soldier.	For each case.
Department of Luzon	6,873	1,572.24	981.23	10.33	8.15	5.24	3.64	15.57	11.79	48.48	39.95	22.38	18.12	17.70	11.26	8.17	8.32
Department of the Visayas	1,952	1,130.12	665.98	17.42	15.37	3.59	2.56	21.01	17.93	43.63	40.50	22.96	21.26	15.92	14.09	8.38	12.58
Samar Island	26	115.38	115.38	.....	.....	.....	.....	.....	.....	4.95	4.74	4.95	4.74	1.81	15.67	1.81	15.67
Leyte Island	664	951.81	621.99	10.54	7.53	4.52	1.51	15.06	9.04	25.37	24.25	13.36	12.53	9.26	9.73	4.88	7.84
Guimaras Island	784	1,309.95	760.20	22.96	21.68	2.55	2.55	25.51	24.23	63.12	57.24	35.61	32.42	23.04	17.59	13.00	17.10
Cebu Island	297	1,208.75	643.10	23.57	20.20	6.73	6.73	30.30	26.93	41.48	40.23	14.90	14.55	15.14	12.52	5.44	8.46
Panay Island	181	1,022.10	535.91	11.05	11.05	.....	.....	11.05	11.05	35.24	33.14	19.19	18.32	12.86	12.58	7.01	13.07
Department of Mindanao	3,883	1,069.79	655.67	11.07	9.79	6.95	2.83	18.02	12.62	40.94	38.07	20.39	19.05	14.94	13.97	7.44	11.35
Mindanao Island	2,863	1,007.68	595.18	11.18	9.78	4.54	1.75	15.72	11.53	38.15	34.89	19.41	17.84	13.92	13.82	7.08	11.90
Jolo Island	1,020	1,244.12	825.49	10.78	9.80	13.73	5.88	24.51	15.68	48.78	46.97	23.15	22.43	17.80	14.31	8.45	10.24
Total	12,844	1,348.02	832.37	11.43	9.61	6.43	4.09	17.86	13.70	52.57	46.61	25.97	22.99	19.19	14.24	9.48	11.39

INFLUENCE OF SEASON.

Exclusive of injuries, venereal diseases, alcoholism, and vaccinia, which are not influenced by season, the highest admission rate occurred in June and the second highest in July. The highest noneffective rate was in June and the second highest in November. The highest rate for malarial fevers was in May, for dengue in June, for dysentery in August, and for diarrhea and enteritis in July. The lowest admission rate was in February, which was the highest last year. The lowest noneffective rate was in December. The highest death rate occurred in January and the lowest in August.

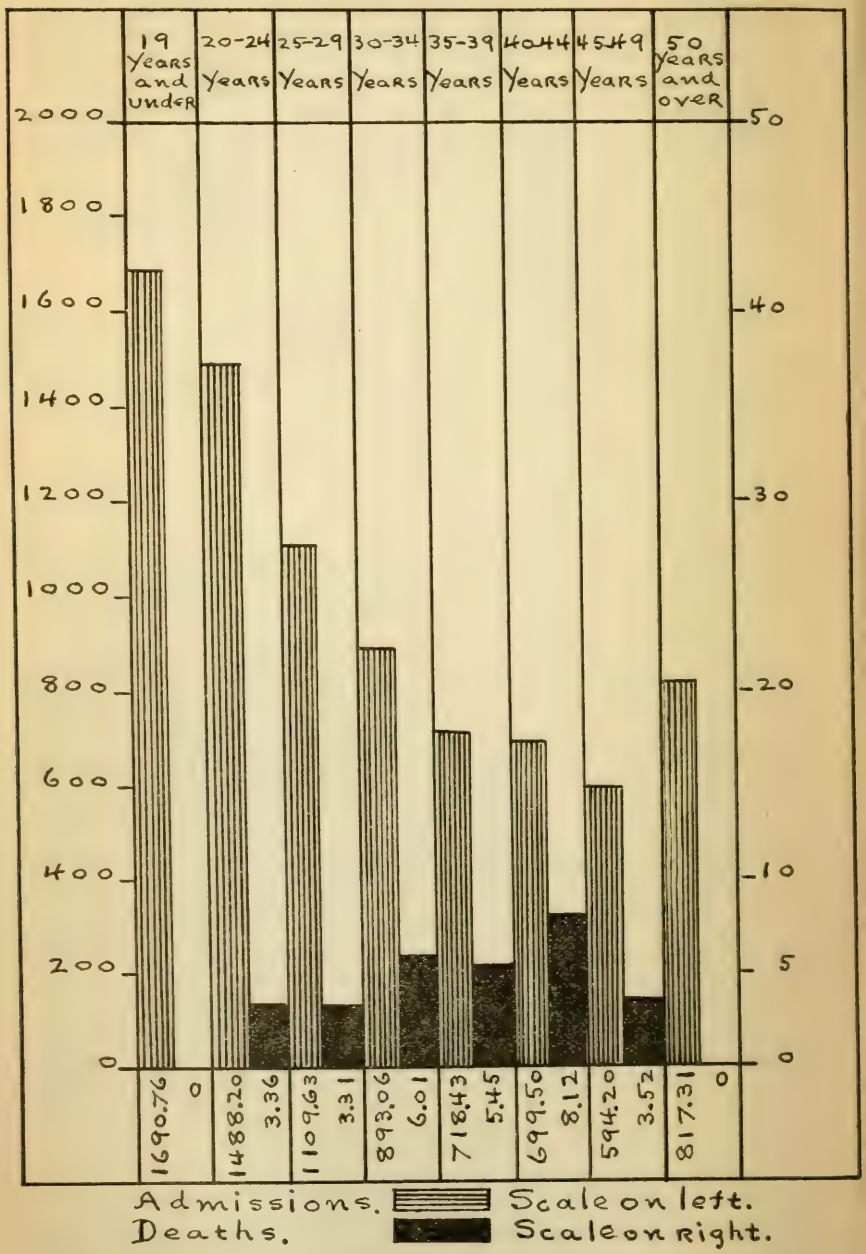
TABLE NO. 39.—*Influence of season on American troops in the Philippines.*

Month.	Mean strength.	Ratios per 1,000 of mean strength.								Prevailing diseases (exclusive of venereal diseases, etc.).
		All causes.					Exclusive of venereal diseases, alcoholism, vaccinia, and injuries.			
		Admissions.		Deaths.	Noneffective.					
		Total.	Hospital.		Total.	Hospital.	Admissions.	Deaths.	Noneffective.	
Jan.....	12,633	106.78	84.62	0.87	44.09	39.03	64.91	0.64	24.50	Malaria, 133; diarrhea and enteritis, 66; dysentery, 52; dengue, 46.
Feb.....	12,493	97.09	77.72	.47	51.25	45.98	53.07	.31	24.17	Malaria, 136; diarrhea and enteritis, 40; dysentery, 33.
Mar.....	12,322	108.10	88.95	.62	55.40	50.64	62.65	.47	24.69	Malaria, 170; dengue, 59; diarrhea and enteritis, 50.
Apr.....	13,146	102.01	86.64	.50	50.95	45.95	59.33	.28	22.39	Malaria, 173; dengue, 48; diarrhea and enteritis, 42.
May.....	13,494	119.46	98.12	.45	56.12	50.00	73.59	.22	24.54	Malaria, 195; diarrhea and enteritis, 80; dysentery, 51.
June.....	13,302	127.95	93.07	.82	57.23	47.73	87.96	.60	29.81	Dengue, 276; malaria, 132; diarrhea and enteritis, 95; dysentery, 71.
July.....	13,027	117.76	97.26	.61	54.93	47.53	78.91	.23	29.08	Dengue, 255; malaria, 96; diarrhea and enteritis, 91; dysentery, 69.
Aug.....	13,202	121.72	89.53	.28	52.72	45.78	76.50	.14	27.84	Dengue, 230; malaria, 124; dysentery, 76.
Sept.....	12,917	112.72	96.62	.38	54.50	48.84	67.82	.15	25.93	Dengue, 193; malaria, 84; diarrhea and enteritis, 52.
Oct.....	12,654	121.07	102.81	.38	52.81	47.62	78.07	.31	27.16	Dengue, 195; malaria, 72; diarrhea and enteritis, 56; dysentery, 44.
Nov.....	12,331	111.51	87.75	.85	56.67	50.64	68.04	.62	29.69	Dengue, 157; diarrhea and enteritis, 67; malaria, 63; dysentery, 55.
Dec.....	12,606	100.03	83.77	.23	43.87	39.58	59.65	.16	21.68	Dengue, 141; diarrhea and enteritis, 83; malaria, 65.
Total.	12,844	1,348.02	1,087.90	6.43	52.57	46.61	832.37	4.09	25.97	Dengue, 1,672; malaria, 1,443; diarrhea and enteritis, 768; dysentery, 553.

INFLUENCE OF AGE (DISEASE ONLY).

Excluding injuries, the highest admission, discharge, and noneffective rates were noted for soldiers under 25 years of age. The highest death rate was for those between 40 and 44, and the lowest death rate for those between 25 and 29.

CHART U.—*Showing by ages the relative admission and death ratios for diseases per thousand of mean strength in the Philippine Islands (American troops).*



LENGTH OF SERVICE (DISEASE ONLY).

Excluding injuries, the highest admission rate occurred in the first year of service; the highest noneffective in the second; the second highest admission in the second, and the second highest noneffective in the first year; the lowest admission and noneffective, in those having ten years or more service. The highest discharge rate occurred in the first year and the lowest in the third. The highest death rate occurred among those having more than ten years service, and the lowest in the fourth year of service.

TABLE NO. 40.—*Influence of disease by age and length of service on American troops in the Philippines.*

Length of service.	Mean strength.	Admitted.	Discharged on surgeon's certificate of disability.	Died.	Constantly noneffective.	Ratios per 1,000 of mean strength.			
						Admitted.	Discharged on surgeon's certificate of disability.	Died.	Constantly noneffective.
Under 1 year	1,138	1,685	27	6	68.81	1,480.67	23.06	5.12	60.46
1 to 2 years	2,870	3,994	43	10	189.88	1,391.64	14.56	3.39	66.16
2 to 3 years	2,313	2,994	9	6	107.99	1,294.42	3.78	2.52	46.69
3 to 4 years	1,011	1,169	12	2	47.55	1,156.28	11.54	1.92	47.03
4 to 5 years	1,032	1,091	9	7	38.40	1,057.17	8.48	6.60	37.21
5 to 10 years	2,466	2,391	23	7	95.18	969.59	9.06	2.76	38.60
10 years and over	2,014	1,530	16	16	61.41	759.68	7.73	7.73	30.50
Total	12,844	14,854	139	54	609.21	1,156.49	10.52	4.09	47.43

Age.	Mean strength.	Admitted.	Discharged on surgeon's certificate of disability.	Died.	Constantly noneffective.	Ratios per 1,000 of mean strength.			
						Admitted.	Discharged on surgeon's certificate of disability.	Died.	Constantly noneffective.
19 years and under	249	421	.....	.....	16.35	1,690.76	.....	.....	65.65
20 to 24 years	4,621	6,877	52	16	276.93	1,488.20	10.94	3.36	59.93
25 to 29 years	3,822	4,241	41	13	173.85	1,109.63	10.43	3.31	45.49
30 to 34 years	2,104	1,879	22	13	80.08	893.06	10.17	6.01	38.06
35 to 39 years	1,069	768	11	6	33.88	718.43	10.00	5.45	31.69
40 to 44 years	599	419	9	5	17.48	699.50	14.61	8.12	29.18
45 to 49 years	276	164	4	1	7.44	594.20	14.08	3.52	26.97
50 years and over	104	85	.....	.....	3.21	817.31	.....	.....	30.85
Total	12,844	14,854	139	54	609.21	1,156.49	10.52	4.09	47.43

TABLE No. 41.—*Discharges for disability, American troops in the Philippine Islands.*

Causes of discharge.	Number discharged.	Percentage of total discharges.	Discharges for disability.				
			In line of duty.	Not in line of duty.		Discharged for disability before assignment.	
				Contracted before enlistment.	Contracted after enlistment.	In line of duty.	Not in line of duty.
General diseases	61	43.88	47	2	12	.....	.....
Tuberculosis (lungs, 43; other organs, 1)	44	31.65	42	2	.....	.....	.....
Venereal diseases	12	8.63	.....	.....	12	.....	.....
Syphilis (secondary, 4; tertiary, 3)	7	5.04	.....	.....	7	.....	.....
Gonorrhea (rheumatism, 3; diseases of the eye, 2)	5	3.60	.....	.....	5	.....	.....
Erysipelas	1	.72	1	.....	.....	.....	.....
Cancer	1	.72	1	.....	.....	.....	.....
Chronic articular rheumatism	1	.72	1	.....	.....	.....	.....
Anemia	1	.72	1	.....	.....	.....	.....
Leprosy	1	.72	1	.....	.....	.....	.....
Diseases of the nervous system	39	28.06	17	18	4	.....	.....
Insanity	26	18.71	11	12	3	.....	.....
Epilepsy	7	5.04	1	6	.....	.....	.....
Cerebral congestion and hemorrhage	3	2.16	3	.....	.....	.....	.....
Primary lateral sclerosis	1	.72	1	.....	.....	.....	.....
Chronic neuritis	1	.72	1	.....	.....	.....	.....
Chronic neurasthenia	1	.72	.....	.....	1	.....	.....
Diseases of the circulatory system	15	10.79	10	5	.....	.....	.....
Organic disease of the heart	8	5.76	6	2	.....	.....	.....
Functional disease of the heart	4	2.88	1	3	.....	.....	.....
Aneurism	3	2.16	3	.....	.....	.....	.....
Diseases of the organs of special sense	7	5.04	5	2	.....	.....	.....
Diseases of the middle and internal ear (otitis, 4; mastoiditis, 1)	5	3.60	3	2	.....	.....	.....
Chronic trachoma	1	.72	1	.....	.....	.....	.....
Anisometropia	1	.72	1	.....	.....	.....	.....
Diseases of the digestive system	7	5.04	4	3	.....	.....	.....
Hernia	2	1.44	1	1	.....	.....	.....
Chronic gastritis	1	.72	1	.....	.....	.....	.....
Chronic indigestion	1	.72	.....	1	.....	.....	.....
Chronic sprue	1	.72	1	.....	.....	.....	.....
Chronic cholecystitis	1	.72	1	.....	.....	.....	.....
Cirrhosis of the liver	1	.72	.....	1	.....	.....	.....
Diseases of the respiratory system	3	2.16	2	1	.....	.....	.....
Chronic pleurisy	2	1.44	2	.....	.....	.....	.....
Chronic asthma	1	.72	.....	1	.....	.....	.....
Congenital malformations and arrested development (flat feet, 1; low mentality, 1; overriding 4th toes both feet, 1)	3	2.16	.....	3	.....	.....	.....
Diseases of the genito-urinary system	2	1.44	.....	2	.....	.....	.....
Chronic enuresis	2	1.44	.....	2	.....	.....	.....
Diseases of the organs of locomotion	2	1.44	1	1	.....	.....	.....
Scoliosis dorso-lumbar region of spine	1	.72	.....	1	.....	.....	.....
Talipes varus	1	.72	1	.....	.....	.....	.....
Total	139	100.00	86	37	16	.....	.....
EXTERNAL CAUSES.							
Fractures	4	33.33	4	.....	.....	.....	.....
Lacerated wounds	2	16.67	2	.....	.....	.....	.....
Secondary results of injury	2	16.67	.....	2	.....	.....	.....
Sprain	1	8.33	1	.....	.....	.....	.....
Concussion of spine	1	8.33	1	.....	.....	.....	.....
Contusion	1	8.33	1	.....	.....	.....	.....
Gunshot wounds	1	8.33	1	.....	.....	.....	.....
Total	12	100.00	10	2	.....	.....	.....
Total diseases	139	92.05	86	37	16	.....	.....
Total external causes	12	7.95	10	2	.....	.....	.....
Grand total	151	100.00	96	39	16	.....	.....

TABLE NO. 42.—*Enlisted men invalided home from the Philippine Islands.*

Causes.	Number of cases.	Percentage of total cases.	Duty.	Discharged on surgeon's certificate of disability.	Died.	Otherwise disposed of.	Remaining at end of year.
Tuberculosis	63	19.15	5	10	[a] 3	1	44
Dysentery	41	12.46	27	.....	.....	4	10
Venereal diseases	38	11.55	10	14	.....	1	13
Insanity	21	6.38	.....	18	.....	.....	3
Sprue	18	5.47	10	1	.....	3	4
Organic disease of the heart	13	3.95	3	7	.....	2	1
Epilepsy	9	2.74	.....	6	.....	.....	3
Fractures, exclusive of gunshot	9	2.74	3	3	.....	.....	3
Secondary results of injury	8	2.43	.....	2	.....	2	4
Neurasthenia	7	2.13	4	1	.....	.....	2
Functional disease of the heart	7	2.13	2	4	.....	1	.....
Malarial cachexia	5	1.52	1	.....	.....	1	3
Enteritis	5	1.52	4	.....	.....	.....	1
Aneurism	4	1.22	.....	3	.....	.....	1
Chronic articular rheumatism	4	1.22	1	1	.....	.....	2
Congenital malformations	4	1.22	.....	3	.....	.....	1
Gunshot wounds	4	1.22	.....	.....	.....	.....	4
Appendicitis	3	.91	2	.....	.....	.....	1
Pleurisy	3	.91	2	1	.....	.....	.....
Incised wounds	3	.91	.....	.....	.....	.....	3
Lacerated wounds	3	.91	.....	2	.....	.....	1
Debility following operation and disease	3	.91	1	.....	1	.....	1
Progressive locomotor ataxia	2	.61	.....	.....	1	.....	1
Other diseases of the spinal cord	2	.61	.....	1	.....	.....	1
Cerebral congestion and hemorrhage	2	.61	.....	2	.....	.....	.....
Melancholia	2	.61	.....	.....	.....	1	1
Typhoid fever	2	.61	1	.....	.....	.....	1
Trachoma	2	.61	.....	1	.....	.....	1
Diseases of the middle and internal ear	2	.61	.....	2	.....	.....	.....
Asthma	2	.61	1	1	.....	.....	.....
Gastritis	2	.61	1	1	.....	.....	.....
Abscess of the liver	2	.61	1	.....	1	.....	.....
Chronic nephritis	2	.61	.....	.....	1	.....	1
Other diseases of the bladder	2	.61	.....	2	.....	.....	.....
Hernia	2	.61	.....	1	.....	.....	1
Other diseases of the circulatory system	2	.61	1	.....	.....	.....	1
Other diseases of the joints, except tuberculosis and rheumatism	2	.61	.....	.....	.....	.....	2
Muscular rheumatism and myalgia	2	.61	1	.....	.....	.....	1
Beriberi	1	.30	1	.....	.....	.....	.....
Osteo-sarcoma	1	.30	.....	1	.....	.....	.....
Anemia	1	.30	.....	1	.....	.....	.....
Chromic alcoholism	1	.30	.....	.....	.....	.....	1
Chronic narcotic poisonings	1	.30	1	.....	.....	.....	.....
Softening of the brain	1	.30	.....	.....	.....	.....	1
General paralysis of the insane	1	.30	.....	1	.....	.....	.....
Other diseases of the nervous system	1	.30	.....	.....	.....	.....	1
Retinitis	1	.30	.....	1	.....	.....	.....
Other diseases of the eye	1	.30	1	.....	.....	.....	.....
Diseases of the thyroid body	1	.30	1	.....	.....	.....	.....
Pneumonia	1	.30	1	.....	.....	.....	.....
Cirrhosis of the liver	1	.30	.....	.....	.....	.....	1
Cholangitis	1	.30	.....	.....	.....	1	.....
Furunculosis	1	.30	.....	.....	.....	.....	1
Periostitis	1	.30	1	.....	.....	.....	.....
Other nontubercular diseases of the bones	1	.30	.....	1	.....	.....	.....
Arthritis	1	.30	.....	.....	.....	.....	1
Other diseases of the organs of locomotion	1	.30	.....	1	.....	.....	.....
Dislocations	1	.30	1	.....	.....	.....	.....
Punctured wounds	1	.30	.....	.....	.....	.....	1
Under observation	1	.30	1	.....	.....	.....	.....
Total cases	329	100.00	89	93	7	17	123
Percentage of total cases	100.00	.....	27.05	28.27	2.13	5.17	37.38

[a] One died of acute yellow atrophy of the liver.

TABLE NO. 43.—*Causes of death, American troops, Philippine Islands.*

Causes of death.	Number of Deaths.	Ratios per 1,000 of—	
		Mean strength.	Total deaths.
DISEASES.			
Dysentery (amebic, 3; bacillary, 6; catarrhal and not given, 5)	14	1.06	259.26
Tuberculosis (of the lungs, 5; other organs, 1)	6	.45	111.11
Organic disease of the heart	6	.45	111.11
Typhoid fever	2	.15	37.04
Pyemia and septicemia	3	.23	55.56
Abscess of the liver	3	.23	55.56
Appendicitis	3	.23	55.56
Acute endocarditis	2	.15	37.04
Dengue	1	.08	18.52
Pernicious malarial fever	2	.15	37.04
Carcinoma	1	.08	18.52
Diabetes	1	.08	18.52
Cerebral meningitis	1	.08	18.52
Locomotor ataxia	1	.08	18.52
Paralysis without specified cause	1	.08	18.52
Rupture of coronary artery (cause unknown)	1	.08	18.52
Pneumonia	1	.08	18.52
Acute yellow atrophy of the liver	1	.08	18.52
Acute nephritis	1	.08	18.52
General debility and atrophy of unknown cause	1	.08	18.52
Enteritis	1	.08	18.52
Chronic pancreatitis	1	.08	18.52
Total diseases	54	4.09	1,000.00
EXTERNAL CAUSES.			
Gunshot wounds (suicidal, 4; homicidal, 3; killed in action, 3; wounded in action, 3; accidental, 3)	16	1.21	516.13
Crushing (kicked by horse, 2; run over by street car, 2; caught under falling building, 1—all accidental)	5	.38	161.29
Fractures (of skull, 1; of spine, 1; of pelvis, 1—all accidental)	3	.23	96.77
Incised wounds (homicidal, 1; accidental, 2)	3	.23	96.77
Drowning (accidental)	2	.15	64.52
Punctured wounds (accidental)	1	.08	32.26
Contusions (accidental)	1	.08	32.26
Total external causes	31	2.35	1,000.00
Total diseases	54	4.09	635.29
Total external causes	31	2.35	364.71
Grand total	85	6.43	1,000.00

PHILIPPINE SCOUTS.

The following table shows the amount of sick for the year:

TABLE NO. 44.—*Movement of sick Philippine Scouts, year 1909.*

	From all causes.		Excluding injuries, venereal diseases, vaccinia, and alcoholism.	
	Total.	In hospital.	Total.	In hospital.
Ratios per 1,000 of mean strength:				
Admissions to sick report	937.98	803.87	780.03	.....
Discharges on surgeon's certificate of disability	14.44	.....	13.36	.....
Deaths	7.40	.....	6.14	.....
Total losses	21.84	.....	19.50	.....
Noneffective	35.11	31.42	28.66	25.85
Average number of days lost:				
For each soldier	12.82	11.47	10.46	9.43
For each case	13.66	14.26	13.41	.....

The admission rate is less than for the preceding year, being 937.98 as compared with 1,057.62. The total loss is, however, higher, being 21.84 as compared with 18.64 for 1908. The noneffective rate is exactly the same as for last year, being 35.11. In the total losses, the death rate was lower, being 7.40 as compared with 8.26, but the discharge rate was higher, being 14.44 as compared with 10.38. The admission rate for malarial fever is 203.95 as compared with 236.97; dysentery, 9.50 as compared with 11.41; venereal disease, 48.61 as compared with 56.05; diarrhea and enteritis, 38.74 as compared with 39.53; beriberi, 103.93 as compared with 121.53; Asiatic cholera, 1.68 as compared with 0.79; and tuberculosis (all), 5.96 as compared with 6.49. The rate of the number of deaths from disease was greater, being 6.14 as compared with 5.57, but the rate for external causes was less, being 1.26 as compared with 2.69. The large death rate from disease was due to the fact that there were 12 deaths from beriberi as compared with 7 for 1908, and 7 deaths from Asiatic cholera as compared with 4.

The larger discharge rate was due to the greater number of discharges for beriberi and tuberculosis, in the former being 33 as compared with 13, and in the latter 28 as compared with 20.

TABLE NO. 45.—*Causes of death among Philippine Scouts, year 1909.*

Causes of death.	Number of deaths.	Ratios per 1,000 of—	
		Mean. strength.	Total deaths.
DISEASES.			
Beriberi	12	2.17	352.94
Cholera Asiatica	7	1.26	205.88
Pneumonia	3	.54	88.24
Septicemia	2	.36	58.82
Hemorrhages	2	.36	58.82
Organic disease of the heart	2	.36	58.82
Typhoid fever	1	.18	29.41
Dysentery	1	.18	29.41
Cancer	1	.18	29.41
Broncho-pneumonia	1	.18	29.41
Abscess of the liver	1	.18	29.41
Chronic nephritis	1	.18	29.41
Total	34	6.14	1,000.00
EXTERNAL CAUSES.			
Gunshot wounds (suicidal, 2; homicidal, 1; accidental, 1)	4	.72	571.43
Incised wounds (suicidal)	1	.18	142.86
Crushing	1	.18	142.86
Ptomaine poisoning	1	.18	142.86
Total	7	1.26	1,000.00
Total disease	34	6.14	829.27
Total external causes	7	1.26	170.73
Grand total	41	7.40	1,000.00

The principal differences from the preceding year are 12 deaths from beriberi as compared with 7 for 1908; 7 deaths from Asiatic cholera as compared with 4; 2 deaths from typhoid fever as compared with none, and no deaths from tuberculosis as compared with 2. There were 7 deaths from external causes as compared with 14 for last year.

DISCHARGES FOR DISABILITY.

The next table shows all discharges for disability.

TABLE NO. 46.—*Causes of discharges for disability, Philippine Scouts, year 1909.*

Causes of discharge.	Number of cases.	Percentage of total discharges.	In line of duty.	Not in line of duty.	
				Contracted before enlistment.	Contracted after enlistment.
DISEASES.					
Beriberi	33	43.42	31	2	.....
Pulmonary tuberculosis	28	36.84	27	1	.....
Organic heart disease	3	3.95	3	.....	.....
Epilepsy	2	2.63	2	.....	.....
Gonorrheal rheumatism	2	2.63	.....	.....	2
Pulmonary paragonimiasis	2	2.63	2	.....	.....
Yaws	1	1.32	.....	1	.....
Paralysis	1	1.32	1	.....	.....
Neurasthenia	1	1.32	.....	.....	1
Hæmoptysis	1	1.32	1	.....	.....
Chronic nephritis	1	1.32	1	.....	.....
Mental deficiency	1	1.32	.....	1	.....
Total	76	100.00	68	5	3
EXTERNAL CAUSES.					
Gunshot wounds	2	50.00	2	.....	.....
Fracture, right astragalus	1	25.00	1	.....	.....
Lacerated wound	1	25.00	1	.....	.....
Total	4	100.00	4	.....	.....
Total diseases	76	95.00	68	5	3
Total external causes	4	5.00	4	.....	.....
Grand total	80	100.00	72	5	3

The most notable differences in this table from the preceding year are the 33 discharges for beriberi as compared with 13, and 28 for pulmonary tuberculosis with 20.

INFLUENCE OF SEASON.

The following table shows the influence of season.

TABLE No. 47.—*Influence of season on Philippine Scouts, year 1909.*

Month.	Mean strength.	Ratios per 1,000 of mean strength.								Prevailing diseases (exclusive of venereal diseases, etc.)
		All causes.					Exclusive of venereal diseases, alcoholism, vaccinia, and external causes.			
		Admissions.			Noneffective.					
		Total.	Hospital.	Deaths.	Total.	Hospital.	Admissions.	Deaths.	Noneffective.	
Jan.....	5,501	92.35	75.80	1.29	40.43	35.75	79.99	1.11	34.52	Beriberi, 128; malarial diseases, 90; constipation, 29.
Feb.....	5,354	79.19	65.18	1.10	46.33	40.16	64.25	1.10	40.53	Beriberi, 84; malarial diseases, 67; constipation, 36.
Mar.....	5,438	91.58	77.79	.55	45.11	39.76	77.05	.55	37.01	Beriberi, 85; malarial diseases, 71; constipation, 36.
Apr.....	5,715	73.14	60.89	.36	39.29	35.18	62.29	.18	33.57	Beriberi, 86; malarial diseases, 78; constipation, 23.
May.....	5,635	62.11	48.98	.36	36.69	32.21	50.58	.18	31.44	Malarial diseases, 68; beriberi, 27; acute abscesses, 24; acute bronchitis, 19.
June....	5,452	64.20	56.86	.54	28.10	25.33	54.66	.54	23.64	Malarial diseases, 63; diarrhea and enteritis, 34; acute bronchitis, 23; constipation, 19.
July.....	5,269	72.50	65.86	.72	28.56	25.92	62.44	.54	23.30	Malarial diseases, 96; beriberi, 28; acute abscesses, 19; acute bronchitis, 18.
Aug.....	5,251	76.37	68.75	.36	31.63	28.26	61.13	.36	24.74	Malarial diseases, 75; beriberi, 38; acute abscesses, 20; constipation, 18.
Sept....	5,222	77.18	66.45	.72	29.45	26.31	63.39	.72	21.74	Malarial diseases, 117; diarrhea and enteritis, 27; acute bronchitis, 17; acute abscesses, 17.
Oct.....	5,182	81.82	69.47	.54	30.53	27.59	65.23	.18	22.48	Malarial diseases, 114; beriberi, 30; acute bronchitis, 21; diarrhea and enteritis, 19; acute abscesses, 18.
Nov.....	5,157	86.30	75.05	.18	32.76	30.28	71.95	.....	25.87	Malarial diseases, 130; constipation, 32; acute bronchitis, 22; beriberi, 21.
Dec.....	5,248	82.51	74.51	.72	32.09	29.94	67.84	.72	24.51	Malarial diseases, 126; acute bronchitis, 31; constipation, 25.
Total.	5,369	937.98	803.87	7.40	35.11	31.42	780.03	6.14	28.66	Malarial diseases, 1,095; beriberi, 558; constipation, 273; acute bronchitis, 224; diarrhea and enteritis, 208.

Excluding injuries, venereal diseases, alcoholism, and vaccinia, over which causes of admission the seasons have little or no influence, the highest admission rate is in January and the lowest in May; the highest constant noneffective rate is in February and the lowest in June. The highest rate for malarial fevers was in November, while for American troops it was in May.

RECRUITING.

The following is from General Order No. 1, Headquarters, Philippines Division, Manila, P. I., January 1, 1909:

The physical examination of recruits for the Philippine Scouts will be conducted in accordance with the authorized manual for examination of recruits, with the following exceptions:

No recruit for the scouts will be accepted for enlistment who is under 59 inches in height or 100 pounds in weight.

The following table will be used in determining the minimum allowable weights and chest measurements relative to height:

Height.		Weight.	Chest measurement (at expiration).
Feet.	Inches.		
		Pounds.	*Inches.*
4 11/12	59	100	28½
5	60	101	28¾
5 1/12	61	102	29
5 2/12	62	103	29¼
5 3/12	63	105	29½
5 4/12	64	107	29¾
5 5/12	65	110	30
5 6/12	66	113	30¼
5 7/12	67	118	30½
5 8/12	68	124	30¾
5 9/12	69	127	31
5 10/12	70	130	31¼

Chest measurements at expiration should be taken under conditions of normal respiratory effort. Chest mobility and measurement at inspiration will be taken, but will not be used as data for rejection of a candidate for enlistment unless they are such as to indicate abnormality or a diseased condition.

In the case of an especially desirable applicant who is active, has firm muscles, and is evidently vigorous and healthy, who varies from the established standard, special authority will be obtained for enlistment. Great care in enlistments for Philippine Scouts is enjoined upon all recruiting officers. No applicant will be accepted without presenting evidence of character and previous employment and exhibiting good intelligence.

The results of the examinations of applicants for enlistment in the Philippine Scouts are given in the following table and are of interest as showing the anthropometrical characteristics of the Filipino races. The proportion of recruits accepted to those examined is about the same as for 1908, but the number was very much less, being 689 in 1909 and 2,506 in 1908.

TABLE NO. 48.—*Examination of Filipino applicants for enlistment during 1909.*

	Number.	Ratios per 1,000 examined.
Examined by medical officers	767	1,000.00
Accepted by medical officers	689	898.31
By first enlistment	357	465.45
Other enlistments	332	432.86
Rejected by medical officers	74	96.48
Declined	4	5.21

Table No. 49 shows ages of accepted recruits.

TABLE NO. 49.—*Filipino recruits (accepted).*

	Number.	Ratio.
18 years and under	3	4.35
19 years	5	7.26
20 years	9	13.06
21 years	134	194.48
22 years	90	130.62
23 years	45	65.31
24 years	76	110.30
25 years	63	91.44
26 years	45	65.31
27 years	53	76.92
28 years	37	53.70
29 years	26	37.74
30 years	20	29.03
31 years	24	34.83
32 years	22	31.93
33 years	8	11.61
34 years	10	14.51
35 years	4	5.81
36 years	2	2.90
37 years	6	8.71
38 years	2	2.90
39 years	.....	.....
40 years and over	5	7.26
Total	689	1,000.00

Sixty-one and seven-tenths per cent were 25 years of age or under.

Table No. 50 shows the height of recruits and the relation of height to age.

TABLE NO. 50.—*Filipino recruits—relation of height to age.*

ABSOLUTE NUMBERS.

Height.	Age.									Total.
	18 years and under.	19 years.	20 years.	21 years.	22 years.	23 years.	24 years.	25 years.	26 years and over.	
4 feet 11 inches	.....	.....	.....	5	2	1	.....	1	4	13
5 feet	.....	.....	.....	11	6	2	1	4	9	33
5 feet 1 inch	.....	2	.....	19	15	2	10	7	23	78
5 feet 2 inches	1	.....	1	30	9	10	8	10	32	101
5 feet 3 inches	.....	2	1	27	18	8	19	11	56	142
5 feet 4 inches	.....	1	5	17	15	10	12	13	46	119
5 feet 5 inches	1	.....	1	13	16	5	14	7	40	97
5 feet 6 inches	1	.....	1	7	4	1	6	6	26	52
5 feet 7 inches	.....	.....	.....	3	2	2	4	3	11	25
5 feet 8 inches	.....	.....	.....	2	1	2	1	1	9	16
5 feet 9 inches	.....	.....	.....	.....	1	1	.....	.....	3	5
5 feet 10 inches	.....	.....	.....	.....	1	1	.....	.....	4	6
5 feet 11 inches and over	.....	.....	.....	.....	.....	.....	1	.....	1	2
Total	3	5	9	134	90	45	76	63	264	689

PROPORTIONAL NUMBERS.

4 feet 11 inches	.....	.....	.....	37.31	22.22	22.22	.....	15.87	15.15	18.87
5 feet	.....	.....	.....	82.09	66.67	44.44	13.16	63.49	34.09	47.90
5 feet 1 inch	.....	400.00	.....	141.79	166.67	44.44	131.58	111.11	87.12	113.21
5 feet 2 inches	333.33	.....	111.11	223.88	100.00	222.22	105.26	158.73	121.21	146.59
5 feet 3 inches	.....	400.00	111.11	201.49	200.00	177.78	250.00	174.60	212.12	206.10
5 feet 4 inches	.....	200.00	555.56	126.87	166.67	222.22	157.89	206.35	174.24	172.71
5 feet 5 inches	333.33	.....	111.11	97.02	177.78	111.11	184.21	111.11	151.52	140.78
5 feet 6 inches	333.33	.....	111.11	52.24	44.44	22.22	78.95	95.24	98.48	75.47
5 feet 7 inches	.....	.....	.....	22.39	22.22	44.44	52.63	47.62	41.67	36.28
5 feet 8 inches	.....	.....	.....	14.93	11.11	44.44	13.16	15.87	34.09	23.22
5 feet 9 inches	.....	.....	.....	.....	11.11	22.22	.....	.....	11.36	7.26
5 feet 10 inches	.....	.....	.....	.....	11.11	22.22	.....	.....	15.15	8.71
5 feet 11 inches and over	.....	.....	.....	.....	.....	.....	13.16	.....	3.79	2.90
Total	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00

Fifty-three and three-tenths per cent of all recruits were 5 feet 3 inches or below the minimum standard for American soldiers.

Table 51 exhibits the weight of Filipino recruits and the relation of weight to age.

TABLE No. 51.—*Filipino recruits—relation of weight to age.*

ABSOLUTE NUMBERS.

Weight.	Age.									
	18 years and under.	19 years.	20 years.	21 years.	22 years.	23 years.	24 years.	25 years.	26 years and over.	Total.
99 pounds and under	.....	.....	.....	3	1	1	2	.....	4	11
100 to 104 pounds	.....	3	.....	21	9	2	5	4	16	60
105 to 109 pounds	.....	1	3	24	8	4	6	9	25	80
110 to 114 pounds	1	.....	2	27	13	9	7	18	53	130
115 to 119 pounds	.....	.....	.....	16	26	4	17	7	38	108
120 to 124 pounds	1	.....	2	21	7	6	12	8	33	90
125 to 129 pounds	.....	.....	1	11	12	7	14	8	35	88
130 to 134 pounds	.....	1	1	4	6	6	4	5	23	50
135 to 139 pounds	1	.....	.....	5	4	3	5	4	19	41
140 to 144 pounds	.....	.....	.....	1	2	3	2	.....	9	17
145 to 149 pounds	.....	.....	.....	.....	2	.....	1	.....	4	7
150 to 154 pounds	.....	.....	.....	1	.....	.....	.....	.....	1	2
155 to 159 pounds	.....	.....	.....	.....	.....	.....	.....	.....	1	1
160 pounds and over	.....	.....	.....	.....	.....	.....	1	.....	3	4
Total	3	5	9	134	90	45	76	63	264	789

PROPORTIONAL NUMBERS.

99 pounds and under	.....	.....	.....	22.39	11.11	22.22	26.32	.....	15.15	15.97
100 to 104 pounds	.....	600.00	.....	156.72	100.00	44.44	65.79	63.49	60.60	87.08
105 to 109 pounds	.....	200.00	333.33	179.10	88.89	88.89	78.95	142.86	94.70	116.11
110 to 114 pounds	333.33	.....	222.22	201.49	144.44	200.00	92.11	285.71	200.76	188.68
115 to 119 pounds	.....	.....	.....	119.40	288.89	88.89	223.68	111.11	143.94	156.75
120 to 124 pounds	333.33	.....	222.22	156.72	77.78	133.33	157.89	126.98	125.00	130.62
125 to 129 pounds	.....	.....	111.11	82.09	133.33	155.55	184.21	126.98	132.58	127.72
130 to 134 pounds	.....	200.00	111.11	29.85	66.67	133.33	52.63	79.37	87.12	72.57
135 to 139 pounds	333.33	.....	.....	37.31	44.44	66.67	65.79	63.49	71.97	59.51
140 to 144 pounds	.....	.....	.....	7.46	22.22	66.67	26.32	.....	34.09	24.67
145 to 149 pounds	.....	.....	.....	.....	22.22	.....	13.16	.....	15.15	10.16
150 to 154 pounds	.....	.....	.....	7.46	.....	.....	.....	.....	3.79	2.90
155 to 159 pounds	.....	.....	.....	.....	.....	.....	.....	.....	3.79	1.45
160 pounds and over	.....	.....	.....	.....	.....	.....	13.16	.....	11.36	5.81
Total	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00

It will be observed that the weight of 82.3 per cent of all recruits is 128 pounds or under, the minimum standard for American recruits.

Table No. 52 shows the chest measurements of recruits and the relation of chest measurement to age.

TABLE NO. 52.—*Filipino recruits—relation of chest measurement to age.*

ABSOLUTE NUMBERS.

Chest measurement.	Age.									
	18 years and under.	19 years.	20 years.	21 years.	22 years.	23 years.	24 years.	25 years.	26 years and over.	Total.
26 inches and under	.....	.....	.....	.....	.....	.....	.....	.....	1	1
27 inches	.....	.....	.....	.....	.....	.....	.....	.....	1	1
28 inches	.....	.....	.....	6	5	.....	.....	.....	3	14
29 inches	.....	3	2	18	8	4	3	3	17	58
30 inches	1	1	2	45	18	11	17	17	46	158
31 inches	1	.....	2	33	30	12	25	22	72	197
32 inches	1	.....	2	22	20	13	18	11	61	148
33 inches	.....	1	.....	7	5	4	6	8	29	60
34 inches	.....	.....	.....	3	3	.....	6	1	17	30
35 inches	.....	.....	1	.....	1	1	1	1	13	18
36 inches and over	.....	.....	.....	.....	.....	.....	.....	.....	4	4
Total	3	5	9	134	90	45	76	63	264	689

PROPORTIONAL NUMBERS.

26 inches and under	.....	.....	.....	.....	.....	.....	.....	.....	3.79	1.45
27 inches	.....	.....	.....	.....	.....	.....	.....	.....	3.79	1.45
28 inches	.....	.....	.....	44.78	55.55	.....	.....	.....	11.36	20.32
29 inches	.....	600.00	222.22	134.33	88.89	88.89	39.47	47.62	64.39	84.18
30 inches	333.33	200.00	222.22	335.82	200.00	244.44	223.68	269.84	174.24	229.32
31 inches	333.33	.....	222.22	246.27	333.33	266.67	328.95	349.21	272.73	285.92
32 inches	333.33	.....	222.22	164.18	222.22	288.89	236.84	174.60	231.06	214.80
33 inches	.....	200.00	.....	52.24	55.55	88.89	78.95	126.98	109.85	87.08
34 inches	.....	.....	.....	22.39	33.33	.....	78.95	15.87	64.39	43.54
35 inches	.....	.....	111.11	.....	11.11	22.22	13.16	15.87	49.24	26.12
36 inches and over	.....	.....	.....	.....	.....	.....	.....	.....	15.15	5.81
Total	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00

The minimum standard chest measure for American recruits is 32 inches at expiration. Sixty-two and three-tenths per cent of all Filipino recruits have a chest measurement below this standard.

The next table, No. 53, gives the causes for rejection among the 767 applicants for enlistments examined by medical officers during the year.

TABLE NO. 53.—*Causes of rejection of Filipino applicants for enlistment.*

	Total.	
	Number.	Ratios per 1,000 rejected for physical causes.
Heart disease	14	189.18
Diseases of the eye, including defects of vision	12	162.16
Under weight	11	148.65
Venereal diseases	7	94.00
Tuberculosis	6	81.09
Diseases of the skin	5	67.57
Defects of development except as shown in detail	3	40.54
Varicose veins, except as shown in detail	2	27.03
Varicocele	2	27.03
Hernia	2	27.03
Chest development, insufficient	2	27.03
Flat feet	2	27.03
Diseases of the nervous system, except as shown in detail	1	13.51
Hemorrhoids	1	13.51
Diseases of the respiratory system	1	13.51
Diseases of the digestive system, except as shown in detail	1	13.51
Diseases of the genito-urinary system, nonvenereal	1	13.51
Under height	1	13.51
Total	74	1,000.00

Diseases of the heart constitute the principal cause for rejection. Notwithstanding the low standard of weight required for these troops, 11 being accepted with a weight of 99 pounds or less, it is seen that underweight is the third most important cause for rejection, this being the principal cause in 1908.

SURGICAL OPERATIONS.

One hundred and fifty-three operations were performed upon Philippine Scouts, 151 of which were successful. There were 2 deaths, 1 due to abscess of the liver and 1 to septicæmia, following operation for abscess of the hip joint.

TABLE No. 54.—*Surgical operations performed on Filipino troops, 1909.*

Operation.	Disease or injury.	Cases.	Result.				Anesthetic.				
			Successful.	Partially successful.	Failure.	Died.	Chloroform.	Ether.	Chloroform and ether.	Local.	None.
	Ear.										
Paracentesis	Otitis media acute	2	2							2	
	Nose.										
Excision with snare	Nasal polypus	1	1							1	
Excision	Nasal spur	1	1							1	
	Abdomen.										
Laparotomy	Stab wound of abdomen, suicidal.	1	1				1				
Drainage trans-pleural route.	Abscess of liver	1				1		1			
Appendectomy, 8; incision and drainage, 2.	Appendicitis	10	10				1	9			
Bassini's operation, 5; Halstead's operation, 1; Ferguson's modified operation, 1.	Inguinal hernia	7	7				1	5	1		
	Anus and rectum.										
Incision and drainage	Ischio-rectal abscess	1	1								1
Excision	Fistula in ano	3	3							3	
Incision and cautery, 2; ligation, 2; ligation and excision, 4; evacuation of clot, 2.	Hemorrhoids	10	10					7		3	
	Genito-urinary system.										
High excision	Varicocele	2	2				1	1			
Epididymectomy	Epididymitis	7	7					7			
Incision and drainage	Peri-urethral abscess	2	2							2	
Circumcision	Phimosis and paraphimosis, 20; elongated prepuce and redundant prepuce, 5.	25	25				1	1		23	
	Nervous system.										
Excision of scar tissue	Contracted scar, involving occipital nerve.	1	1					1			
	Skin and cellular tissues.										
Incision and drainage	Abscess	40	40				3	3		12	22
Do	Nevus	1	1							1	
Keller's operation, 10; excision, 1.	Ingrowing toe nail	11	11				1			10	
	Lymphatic system.										
Excision of gland	Adenitis, sublingual, tubercular.	1	1				1				
Incision and drainage	Adenitis, axillary, nonvenereal.	1	1					1			

TABLE NO. 54.—*Surgical operations performed on Filipino troops, 1909*—Continued.

Operation.	Disease or injury.	Cases.	Result.				Anesthetic.				
			Successful.	Partially successful.	Failure.	Died.	Chloroform.	Ether.	Chloroform and ether.	Local.	None.
	Lymphatic system—Cont'd.										
Incision and drainage, 2; excision of gland, 3.	Adenitis, inguinal, venereal.	5	5	....	....	....	....	4	....	1	....
Incision and curettage	Adenitis, character and site not stated.	1	1	....	....	....	....	....	....	....	1
	Muscles, tendons, fascia, ligaments, and bursæ.										
Suturing of muscle	Laceration of flexor longus pollicis.	1	1	....	....	....	....	1	....	....	....
Tenorrhaphy	Severed tendon, finger	1	1	....	....	....	....	....	....	1	....
Keller's operation	Hallux valgus	1	1	....	....	....	....	1	....	....	....
Excision	Bunion	2	2	....	....	....	1	1	....	....	....
	Bones.										
Cushing's decompression operation.	Fracture, severe, base of skull.	1	1	....	....	....	....	1	....	....	....
Removal of necrotic bone	Osteo-myelitis of tibia	1	1	....	....	....	1	....	....	....	....
	Joints.										
Incision and drainage	Abscess of hip joint and gluteal region.	1	....	....	....	[a] 1	....	1	....	....	....
	Amputations.										
Amputation of hand	Lacerated wound of hand	1	1	....	....	....	....	1	....	....	....
Amputation of finger	Fracture of finger, 1; permanent flexion of finger, 1; necrosis of thumb, 1.	3	3	....	....	....	....	2	....	1	....
Amputation, site not stated	Malignant growth of leg	1	1	....	....	....	....	1	....	....	....
Amputation of toes	Gunshot wound of second and third toes.	1	1	....	....	....	....	....	....	1	....
	Tumors.										
Excision	Tumor, nonmalignant, nature not stated.	5	5	....	....	....	....	....	....	5	....
Total cases		153	151	....	....	2	12	49	1	67	24

[a] Died of septicemia.

PREVALENCE OF DISEASES, BY RACES, IN THE PHILIPPINES.

In making this comparison it is to be borne in mind that the native troops were serving in their own country under conditions natural to them, but inimical to our troops, and that American soldiers excused from any portion of their military duty, no matter how trivial the cause, are placed on sick report, while this is not the case with the Philippine Scouts.

The admissions and constant noneffective rates were much lower for Filipino than for American troops serving in the Philippines, the admission rate for American troops being 1,348.02 and for Filipino 937.98, but the death and discharge rates for the Filipino troops were higher than for American, the death rate for the former being 7.40 and for the latter 6.43, while the discharge rate for the former was 14.44 and for the latter 11.43.

The following table indicates the relative susceptibility of the races to the diseases noted:

TABLE NO. 55.—*Important diseases by races, Philippine Islands.*

Disease.	Admission rates.			
	American troops.			Filipino troops.
	Total.	White.	Colored.	
Venereal diseases	301.85	290.29	418.46	48.61
Dengue	130.18	138.13	50.04	12.29
Diarrhea and enteritis	59.79	63.24	25.02	38.74
Dysentery	43.06	44.50	28.47	9.50
Furuncle	35.89	37.15	23.30	18.07
Alcoholism	22.19	23.53	8.63	.19
Muscular rheumatism and myalgia	19.93	18.66	32.79	16.95
Tonsillitis	18.53	18.83	15.53	1.86
Articular rheumatism, acute and chronic	7.63	6.85	15.53	3.54
Appendicitis	7.24	7.70	2.59	.93
Typhoid fever	6.15	6.59	1.73	1.30
Measles	.16	.17	.0	.0

Disease.	Filipino troops.	American troops, Philippines.		
		Total.	White.	Colored.
Malaria	203.95	112.35	115.10	84.56
Beriberi	103.93	.16	.17	.0
Bronchitis, acute and chronic	43.40	25.38	24.47	34.51
Intestinal parasites	29.43	2.80	3.08	.0
Dhobie itch	19.00	13.55	12.32	25.89
Tuberculosis, all	5.96	5.06	4.96	6.04
Influenza	4.28	.93	1.03	.0
Pneumonia	3.54	1.17	1.20	.86
Cholera	1.68	.0	.0	.0
Smallpox	.56	.0	.0	.0

PREVALENCE OF SPECIAL DISEASES.

The rates for venereal diseases, diarrhea and enteritis, alcoholism and dengue all were higher among American troops, as was the case last year. Dysentery is this year higher among American troops. Tuberculosis is still higher among the Philippine Scouts, as is also malarial fever, beriberi, and cholera.

As has been mentioned elsewhere, the lower rate for venereal diseases among the Filipino troops is believed to be due largely to the fact that a large per cent of them are married. The excessive prevalence of malarial fever among them, the rate being 203.95 as compared with 112.35 for the American troops, may possibly be due to the same cause, as all the married men among the native troops live in their own native houses as much as possible.

There were 10 cases of Asiatic cholera with 7 deaths among the native troops. The following is an extract from the report of the chief surgeon Philippine Division, Colonel Crampton, in regard to the occurrence of cholera among the native troops and in the adjoining towns:

* * * There were 9 cases with 7 deaths among the native troops. Of these 8 cases with 5 deaths occurred in the Department of the Visayas. Camp Connell had 2 cases with 2 deaths; Tolosa, 1 case, resulting fatally; Balamban, 4 cases, 2 deaths.

In towns adjacent to posts in that department garrisoned by native troops, the disease was epidemic in the first quarter of the year at Tacloban, Leyte, and Calbayog, Samar, and a few cases occurred at Cebu, Balamban, Iloilo, and Laoang. In the second quarter the epidemic still continued at Calbayog, became marked at Balamban, and 5 cases were reported from Iloilo. A few sporadic cases occurred at Cebu in August and September. The disease became epidemic in November, probably due to wet infection after severe rainstorms. The greatest daily number of cases, 73 with 48 deaths, was reported on November 16. Up to December 19, 217 cases with 205 deaths resulted, but none among the soldiers. The remaining 2 cases among the scouts occurred at Camp Ward Cheney, Luzon, in December; both died. In the Department of Mindanao no case occurred among the troops. An epidemic appeared at Dapitan and neighboring towns in April, 1909, continuing until July, 1909, when it subsided. There were 336 known deaths.

The great prevalence of beriberi among the Philippine Scouts as compared with the almost entire absence of the disease among the American troops is explained by Capt. Edwin D. Kilbourne, of the tropical board, as follows:

Since the occupation of the Philippines by the American forces in 1898 beriberi has been endemic in the native population and several cases have been reported among the whites. Although I have examined several white soldiers and civilians said to have beriberi, I can not say that I have ever seen a genuine case in this class, and am of the opinion that the disease is extremely rare among them. In the Tropics it is easy to confuse multiple neuritis from other causes with true beriberi.

The relationship of rice to beriberi is so well established that a consideration of one must include the other, therefore a brief outline of the rice-eating habits of the inhabitants of the islands is here given. Nearly all the tribes of the Philippines are of the Malay race, and though not all are of the same religious belief, their modes of preparing rice for eating are practically identical. None, as far as I can ascertain, use parboiled rice. There are a considerable number of Chinese and a few East Indians, all of whom use polished rice, either native or imported. The latter prefer an Indian polished rice which they import in small amounts for their own consumption.

The inhabitants in the interior use irrigated rice when practicable and mountain or upland rice when water is not accessible. Those in the lower lands use, mostly, irrigated native rice. Those on the coast use irrigated native rice, or imported rice brought principally from the British and French East Indies and from Siam.

For twenty-one years preceding, and since the American occupation there has not been enough native rice produced to supply the population. Before 1877 this was not so; then the rice exported exceeded that imported. The rice used in the Philippines, as regards preparation, is of three kinds; that grown at home and pounded out by hand in large wooden mortars, that grown at home and submitted to milling of varying degrees of thoroughness, and the imported rice, all of which has been milled and polished abroad.

The first variety, home grown and hand pounded, is used in the rural districts and by about half the natives in the coast towns. The second and third varieties, polished native and imported rice, are used principally in the coast towns and their immediate vicinity. There are regions where little or no rice is consumed, as in the Batan Islands just north of Luzon. Meat and vegetables constitute the diet of the inhabitants of these islands; they have no beriberi. In the town of Aparri, 120 miles south of the Batan group, imported polished rice is found for sale in the tiendas and beriberi exists among the natives. On the contrary, in the coast towns of Casiguran and Baler, which are around the corner from Aparri on the east coast of Luzon, no imported rice was observed in the tiendas and no beriberi in the people.

In general, beriberi is found in the coast towns and along the lines of communication and in the same places polished rice is extensively eaten. At Taytay, in Rizal Province, a small town of 6,000 inhabitants, about 15 miles from Manila, beriberi is remarkably scarce, although the town is on the railroad. As a matter of fact, however, polished rice seems to be little if any used there. Samples of rice gathered at random in the tiendas of Taytay were all of the home-grown varieties and incompletely milled.

Our observations seem to prove that beriberi in the Philippines is found only where polished rice, either imported or home grown, is used, principally along the coasts or rivers. No doubt the new railway system will open up new areas of consumption of polished rice and the distribution of beriberi in the Philippine Islands be changed in the next few years.

This etiological relation of polished rice to beriberi agrees with the findings of other workers. If polished rice is a factor in the causation of beriberi, and this seems to us

to be proven, it must be because it either conveys into the body some extraneous poisonous substance, or else is deficient in or at least fails to give to the body enough of some needed element or elements.

* * * * * * *

A deficiency in the amounts of potassium and phosphorus, or a disproportion between these elements and sodium, calcium and magnesium might well account for the production of beriberi. As in the case of rickets and scurvy, because of the intricacy of the problems involved and the large part played by the selective powers of the body tissues we may never be able to express in terms of chemical equations, the pathological processes of this disease, but I believe we do know enough of its etiology to prevent its occurrence.

By a proper diet we hope to eradicate it from the native troops. Of course, predisposing causes, such as bad ventilation, overexertion, exposure, etc., must receive their share of attention. As a result of our studies, certain changes are to be instituted in the Filipino ration. The rice is to be reduced to 16 ounces and native No. 2 rice substituted for the polished Siam rice now supplied. One and six-tenths ounces of beans are to be added. It is hoped that by these changes beriberi will disappear from the Scouts.

The following table is from a report made by Capt. William R. Eastman, Medical Corps, of an investigation made at Cotabato, Mindanao, P. I., as to the prevalence of the infection of Philippine Scouts with intestinal nematodes:

Table No. 56.

	Number.		Percentage.	
	Moros.	Filipinos.	Moros.	Filipinos.
Cases in hospital	41	30	.....	.....
Cases examined for intestinal parasites	35	22	.....	.....
Cases not examined	6	8	.....	.....
Cases with one or more parasites present	30	15	85.7	68.2
Cases negative	5	7	14.3	31.8
Species of parasites found (ova, larvæ, or adults).				
Ankylostomum duodenale	20	7	57.1	31.8
Tricocephalus trichiuris	22	9	62.8	40.9
Ascaris lumbricoides	17	4	48.6	18.2
Strongyloides stercoralis	2	1	5.7	4.5
Cases in which 3 parasites present	6	1	.....	.....
Cases in which 2 parasites present	19	4	.....	.....
Cases in which 1 parasite present	5	10	.....	.....
Cases with symptoms due to parasites, severe	2	.....	.....	.....
Cases with symptoms due to parasites, moderate	2	.....	.....	.....
Cases with symptoms due to parasites, mild	4	.....	.....	.....
Cases no symptoms	22	15	.....	.....

SANITATION IN THE PHILIPPINE ISLANDS.

The chief surgeon of the Philippines Division, Col. Louis W. Crampton, Medical Corps, in his report for the year 1909, has the following to say with regard to general sanitary questions:

Sanitary conditions in general remain good and are being steadily improved. The dry-earth system of disposal of excreta, supplemented in the larger posts by crematories, is in use throughout the division. Boiled or distilled water is used at all stations, except where artesian wells have been drilled.

Early in the year, under instructions from Washington, khaki helmets were issued for experimental purposes to all regular troops in the Philippines. The helmets were habitually worn by officers and enlisted men for all garrison duty, except target practice. The division commander directed that careful observation be made of these helmets while in use, "with a view to obtaining, if possible, sufficient data to settle definitely the question whether or not this helmet is desirable for use in our army in the Tropics in time of peace." The general consensus of opinion favors the helmet.

My personal experience with the helmet has been very limited. With regard to its durability, I do not think it will stand as much rough usage as the campaign hat. It affords a better protection from the vertical rays of the sun, but does not afford as much protection against rain, and is much better ventilated than the hat. As to comfort, that is greatly a matter of personal opinion of the wearer, and I find the hat more comfortable. The helmet presents a better appearance and retains its shape much better than the service hat. In general I believe that if the shape of helmet were changed so as to make it give better protection to the face—by increasing the brim in front and on the sides—it would be better adapted for service in the Tropics than the service hat. Presumably the entire question will be fully reported upon by the division commander.

The subject of foot covering for Moro scouts is also a matter at present being experimented upon. The surgeon, Camp Vicars, remarks as follows:

My experience with native troops embraces my service with the Moro scouts and native soldiery of Central America. I have never seen any, except the Moro scouts, with absolutely no foot covering. The Mozo of Central America and Mexico, whose feet are certainly as tough as any in the world, and who is barefooted most of the time, uses a leather sandal called "kite" or "cyte." These they use over the lava formations and rough barren country. The soldiery use the same and when marching over sand or mud take them off and sling them from their machete belts. In fact the Mozos of the west coast of the United States of Colombia use a piece of iron beneath it at times. In all my conversations with various officers, either British, German, or American, that have had service or are serving with native soldiery, I only remember one who was in favor of the unshod soldier. The Indian of North America uses his moccasin. I know not of any human or animal being whose tissues are not vulnerable. I would earnestly suggest a suitable foot covering for Moro troops. And the results to date justify the opinion that some kind of foot covering is necessary in order to get the best service out of them.

With the gradual concentration of troops into large posts and the construction of permanent quarters of durable material, malarial infection will naturally be greatly diminished. Owing to the architecture of most of the present buildings, it is practically impossible to screen them against mosquitoes. However, every possible precaution is being taken. The subject of drainage and filling in of mosquito-breeding places is receiving appropriate attention, and careful supervision is exercised to see that the orders requiring all men to sleep under mosquito bars are complied with.

SEWERAGE.

In some of the larger posts sewers are now in use, but in the majority of all posts the dry-earth system is still in use. The substitution of McCall incinerators for the less satisfactory dry-earth system is again recommended until sewers can be installed.

TYPHOON.

On November 6, 1909, a severe typhoon occurred at Camp Bumpus, Tacloban, Leyte, causing destruction of a number of public buildings and much damage to other structures. One death (by crushing) of an enlisted man occurred and five injuries were reported.

SANITARY RECOMMENDATIONS.

The recommendations in the sanitary reports relate mainly to the necessity of establishing sewer systems, systems of pure-water supply, antimalarial and antimosquito measures, and measures to be taken to lessen the occurrence of venereal diseases.

ORANGE-RED UNDERCLOTHING TEST.

Mention was made in the last annual report in regard to experiments that were being made to determine the value of orange-red underclothing as protection against the tropical heat and light. These experiments continued for over a year and were completed during the present year 1910. A full report was made by Capt. James D. Phalen, Medical Corps, a brief summary of which is as follows:

The test of the orange-red underwear and hat linings was undertaken as a result of recommendations by the Inspector-General of the Army. The garments were prepared at the Philadelphia depot of the Quartermaster Department and were of a deep orange-red color. The shirts averaged one-fifth of an ounce heavier than the white ones worn by the controls. The orange-red drawers were of a different type from the white ones and averaged 1½ ounces heavier. The garments faded materially on washing, especially if exposed to the sun while drying. However, the inner surface retained much of the dye, and it is not thought that the fading was so great as to destroy the value of the tests.

It had been intended to equip 1,000 men with the special underwear and an equal number of controls with white, but, owing to inability to fit sufficient men from the 5,000 suits furnished, it was found impossible to equip over 500 with the orange-red garments. The tests were carried out under the immediate supervision of the following medical officers at the posts shown after their names:

Maj. C. C. Collins.....Fort McKinley, Rizal, P. I.
First Lieut. C. L. McKinney.....Camp Stotsenburg, P. I.
First Lieut. H. A. Philips.....Camp Jossman, Guimaras, P. I.
First Lieut. C. D. Cowles, jr.....Zamboanga, Mindanao, P. I.

The men wearing the special clothing and the controls wearing white were taken from the same companies, which were equally divided in such a way as to make the two groups as nearly as possible equal in physique. Those with long tropical service or who were exceptionally weak were excluded.

The experiment was kept up during the calendar year of 1909 and a summary of the results is as follows:

1. *Weight.*—There was a loss of weight during the year in both groups of men, more marked in the mid-year (hot season) weighings, a certain amount of the mid-year loss being made up by the end of December. The loss of weight at the mid-year observavations was greater by an average of 1 pound for the orange-red group than for the control group. At the end of the period of observation there was no difference of weight in the two groups.

2. *Blood examinations.*—The results in both groups agreed in character if not in degree with those of Captain Wickline, Medical Corps, showing an increase above normal in the number of red cells and a decrease in the percentage of hemoglobin, the hemoglobin index being necessarily still more diminished. The increase of red cells and the decrease of hemoglobin were both more marked in the orange-red group than in the controls. Both this change and the greater loss in weight referred to above, as well as the lowered blood pressure mentioned below, may have been due to increased perspiration on the part of the orange-red group during the hot season.

3. *Blood pressure.*—The blood pressure of both groups fell during the hot season, the fall being slightly more marked in the orange-red group. In December the pressure in both groups returned to practically the original point.

4. Pulse, temperature, and respiration were taken after drill or other exercise, 8,000 observations being made. Averages for 1,500 observations are shown in the following table:

	Temperature.	Pulse.	Respiration.
Orange-red group	98.792	91.2	22.3
White group	98.780	90.9	21.3

It will be seen that each is higher for the orange-red group than for the controls, but the differences are very slight.

5. Comparative sick reports showed insignificant differences. The admissions per 1,000 and the days lost per 1,000 were, respectively, 508 and 3,526 for the special group

and 478 and 3,522 for the white group. The admissions per 1,000 for heat exhaustion were higher for the orange-red group, 27, as compared with 21 for the controls.

6. *Strength tests.*—Strength tests on men from the two groups showed nothing of value.

7. *Symptoms referable to climate.*—The two groups suffered about equally from these except as regards excessive perspiration, which was much more complained of by the men of the orange-red group.

8. *Impressions of the wearer.*—Sixteen men preferred the orange-red garments, 54 had no choice between the colors, and the remainder, nearly 400, expressed an opinion adverse to the colored underwear; 50 said it was hotter and 104 others stated that it caused more profuse perspiration. No organization commander saw any benefit from its use, and of 16 officers who used it for a time only 1 expressed approval.

9. *Photographic experiments.*—Experiments showed that the campaign hat was as impervious to the rays affecting the photographic plate without the orange lining as it was with it. The lining added materially to the opacity of the khaki cap. The differences in penetrability by actinic rays between a light skin and a dark Filipino were slight and were entirely neutralized by one layer of khaki uniform cloth. The pigment of the darkest skin was found nowhere near as protective as was the orange-red garment.

10. *Temperature experiments.*—Extensive experiments, both on and off the body, showed that when exposed to the sun the temperature was greater beneath the orange-red material than it was beneath similar white material. The same was found to be true when both materials were overlaid by khaki cloth

11. *Moist heat experiments.*—These were carried out at Los Baños in a room ranging from 90° to 98° F., and with the atmosphere saturated with moisture. Men remaining four hours in this room lost greatly in weight and had a marked rise in temperature with acceleration of pulse and respiration and a fall in blood pressure.

From the results of the whole test and the experiments the conclusion was reached that the physiological effects of the climate in the Philippines can be and probably are produced without the aid of the sun's actinic rays, and no evidence was found that the sun's rays alone could or did produce these effects. No benefits appeared to result from wearing the orange-red garments. On the contrary, the test underclothing added materially to the burden of heat which the system was compelled to endure and which is probably the chief cause of tropical deterioration. Even if the actinic rays have any influence whatever on the system, it is believed that they are sufficiently excluded by the khaki uniform and the campaign hat.

TRANSPORTS.

SANITARY CONDITION.

The sanitary condition of the various transports and the accommodations provided for troops on them has been in the main satisfactory, and the majority of the sanitary faults, which exist or have arisen from time to time have been corrected with promptness.

Outbreaks of measles occurred on the *Sheridan* and *Thomas*. On the *Sheridan* there were 10 cases and on the *Thomas* 4 cases. These cases were promptly isolated as they occurred and the epidemic controlled.

During the early part of the year there was an outbreak of variola on the *Burnside*, 6 cases developing, with 1 death. Prompt measures were taken to isolate the cases as they developed, to vaccinate the crew, and to fumigate the quarters. However, it was several weeks between the time of the appearance of the first case and the last one A case of variola appeared on the *Sherman* about June 5.

On March 19, 1910, the Twenty-third Infantry embarked on the *Sheridan* at Parang, P. I. An epidemic of typhoid fever had been in progress there since October, 1909. Several suspected cases occurred before leaving Manila and 3 on the voyage to San Francisco, 1 of which was a typical clinical case.

During the voyage of the *Kilpatrick* from Manila to New York, after leaving Colombo, an extensive epidemic of gastro-enteritis

developed, about 250 cases in all. There was also a similar epidemic on the *Sherman* May 30 to June 2, 1910, with about the same number of cases.

BOARD FOR THE STUDY OF TROPICAL DISEASES.

During the year 1909 this board was composed of Capt. James M. Phalen, Capt. Edwin D. Kilbourne, March 10 to December 31, 1909; Lieut. Henry J. Nichols, January 1 to July 15, 1909; Maj. Weston P. Chamberlain reported for duty August 31, 1909, but was on leave from September 10, 1909, until January 8, 1910. Captain Phalen was relieved March 23 by Capt. Horace D. Bloombergh.

The experiments upon the subject of the orange-red underclothing which lasted more than a year were completed and the summary of the findings is given under the subject of "Sanitation in the Philippine Islands."

TYPHOID FEVER.

A large amount of work was done in typhoid fever and especial mention is made of the epidemic at Camp Eldridge, Laguna, and at Ludlow Barracks, Parang, under the subject of "Prevalence of special diseases in the Philippines."

BERIBERI.

A group of Englishmen, and especially Fraser, working in the Malay Peninsula, arrived at the conclusion that the beriberi which is quite prevalent in the peninsula, while quite rare in India, was due to difference in the rice in the diet; in India, the cured rice is used, while in the Malay Peninsula the uncured rice is used. In curing rice the ripe grains still in husks are soaked in water a number of hours and then boiled or steamed a number of minutes. The rice is than dried or husked. The covering loosens the husk so that it comes off easily, leaving the grains intact and darkened, made translucent and semi-gelatinous. When rice is husked, without previous treatment, as the husk is firmly adherent to the grain, considerable violence is necessary to remove all trace of it, and the result is that the outer layers of the grain containing the proteid and fatty element are partly torn and the grains are more or less fractured. In the Philippines the No. 1 grade is a white, well-polished rice with practically all the pericarp and very likely most of the aleurone layer milled off, and therefore no better than the Saigon (choice) rice, or uncured white rice. The No. 2 grade is an imperfectly milled rice to which most of the pericarp still adheres. This corresponds to the cured rice used in India. This latter variety is approved by the board for issue to the Philippine Scouts. Potassium and phosphorus have been found deficient in the food of the organizations having beriberi, the deficiency being more marked in the potassium.

All the papers on beriberi read before the Far Eastern Association of Tropical Medicine at the recent meeting in Manila attributed the occurrence of the disease to the use of overmilled or polished rice (i. e., rice deprived of its pericarp and perhaps its aleurone layer).

Fraser and Stanton were able to produce a polyneuritis in fowls by feeding uncured (white, polished) rice, and to cure the same whenever

desired by using cured (unpolished) rice, or by a mixture of the millings and the uncured rice. They also prevented beriberi in the natives of the Malay Peninsula by using the cured (unpolished) rice or by combining the polished rice and the millings in proper proportion.

Two readers considered that the deficiency of phosphorus, due to removing the pericarp, caused the disease. As a result of the recommendation of the board a change has been made in the Filipino ration. The issue of rice is limited to 16 ounces instead of 20 as heretofore, substituting 1.5 ounces of beans for the rice thus cut off. Savings on fresh meat have been forbidden. The subsistence department will supply native grown rice, No. 2 grade, instead of the Saigon type, as soon as the stock on hand has become exhausted, about August 1, 1910.

WORK AT TAYTAY.

During March, April, May, and June, 1909, a medical survey of a typical Filipino town was made. The survey was organized by Doctor Freer, director of the bureau of science, and Dr. P. E. Garrison, U. S. Navy. Its permanent personnel was Doctor Garrison, Dr. Paul Clements, of the bureau of health, Lieut. H. J. Nichols, of the tropical board, and a number of recent graduates and students of the Philippine Medical School.

Taytay is a town of about 6,000, situated in Rizal Province. The important findings are the following:

1. The water supply is bad; bacillus coli and amœbæ were found in all the sources of supply except one small spring. Artesian water is probably obtainable.

2. The disposal of excreta amounts to little more than ridding the body of them. Over one-half of the houses have absolutely no provision for this purpose and in only 8 per cent is the arrangement at all satisfactory. The pit system with rigid inspection by the municipal physician and police seems to be the most feasible remedy at present.

3. The insignificance of hook-worm infection in this representative area. Only 10 per cent of 1,000 persons of the general population were found infected and no clinical cases were found. Over 80 per cent have whip and round worms. Amœbiasis affected only about 5 per cent.

4. The existence of typhoid fever with no history of recent importations was clearly demonstrated.

5. Tuberculosis affects about 1 per cent of the population with a mortality of about 20 per year. No place infections were found.

6. Malaria prevails along the banks of the streams to the extent of 1 per cent of the general population.

7. Yaws occur in small groups of houses indicating contact infection.

8. Goitre is present to a considerable extent in noncretaceous soil.

9. Beriberi and venereal diseases were conspicuous by their sparcity. All the cases of beriberi were "rudimentary," and even this diagnosis might be questioned.

10. The amount of filariasis and elephantiasis agrees with our estimate for Tagalogs made on the basis of the examination of the scouts.

AN EPIDEMIC OF CONJUNCTIVITIS AMONG FILIPINOS.

An epidemic of conjunctivitis occurred among the native workmen engaged in the erection of fortifications on Corregidor and Carabao islands. On each island about 2,000 natives were employed, one-half of this number on Corregidor being convicts from Bilibid. It was estimated that on each island there were about 500 cases during the last six months of 1909. A number of cases were examined and found to be caused by the Koch-Weeks bacillus.

The spread of the different varieties of infectious conjunctivitis is thought to be brought about in the following ways:

1. Direct contact, as hands, towels, handkerchiefs, etc.
2. Through the agency of flies whose feet become contaminated from the muco-purulent discharge.
3. By dust containing dried discharges.
4. By droplets discharged in sneezing, nose blowing, coughing, and speaking, the infected tears having passed into the mouth and nasal cavities through the lachrymal ducts.

The Koch-Weeks bacillus is easily killed by drying, so it is probable that dust has little to do with the spread of this form of conjunctivitis. Flies were scarce at Corregidor and Carabao, as is generally the case throughout the Philippines. In this epidemic there was excellent opportunity for infection by direct contact and by droplets, and it is probable that both were concerned in the dissemination of the germ.

BACILLARY DYSENTERY.

Dysentery of the bacillary type was more prevalent throughout the Philippines during the spring, summer, and early autumn of 1909 than for many years previously, assuming in many localities the proportions of epidemics. The disease has affected both the native population and Americans, the military service being severely affected in one post.

TRYPANOSOMIASIS OF BATS.

Trypanasomes were found present in the blood of 8 bats out of 45 examined. The board was unable to determine the species.

EFFECTS OF TROPICAL CONDITIONS ON BLONDS AND BRUNETTES.

An investigation has been started with a view to proving or disproving the theory that the actinic rays of the sun produce more marked and injurious effects on blonds than they do on brunettes.

DIPHTHERIA.

During the quarter ending March 31, 1910, in Manila 9 cases with evidence of throat disease were examined, from 3 of whom positive cultures for diphtheria bacilli were obtained. Ten contacts were also examined and positive cultures obtained from 2.

VINCENT'S ANGINA.

Six cases of ulcero-membraneous angina were reported, which were believed by the board to be the first reported from the Philippines. In each of these cases the causative organism was found, a slightly fusiform bacillus. Spirochoetes were also found in these cases.

HOOK-WORM INFECTION.

Examination of Filipino adults at Bilibid prison and in scout organizations has shown infection rates ranging from 50 to 60 per cent, but among 9,885 members of the general population examined by

the bureau of health and drawn from widely separated regions in Luzon the rate has varied from 11.1 per cent to 16.1 per cent. The percentage of infection was highest in the male, next in the female, and least in the children. In one series of 2,500 in the Cagayan Valley the rates were: Males, 21 per cent; females, 9 per cent; children, 2 per cent. Among adult male Igorots, in the mountainous province of Benguet the board found about 25 per cent infected with uncinaria. In the opinion of the board this disease rarely causes notable disability among Filipinos and is apparently of minor economic importance in the islands, contrasting sharply with conditions in Porto Rico.

DENTAL AND ORAL DISEASES.

The number of dental operations during the year was 47,378, being an increase over the preceding year, which was 45,841. The ratio per 1,000 of mean strength was, however, less, being 567.33, as compared with 700.87. This, however, can not be taken as a measure of the dental diseases in the army, but represents what the number of dentists available are able to accomplish. The number should be increased so that each man in the army could receive at least one treatment yearly.

The summary of the work of contract dental surgeons is contained in Table No. 57.

TABLE NO. 57.

DENTAL AND ORAL DISEASES.

	Cases admitted to treatment.		Operations performed.	
	Number.	Ratio.	Number.	Ratio.
United States (continental), exclusive of Alaska	24,754	413.73	25,949	433.70
Philippine Islands	18,062	946.55	18,289	958.44
Alaska	743	663.39	565	504.46
Cuba	405	633.80	413	646.32
Hawaii	1,738	1,641.17	2,162	2,041.55
Total	45,702	547.26	47,378	567.33

DENTAL CARIES—NUMBER OF TEETH TREATED.

	White troops.		Colored troops.		Filipino troops.		Total.	
	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.
United States (continental), exclusive of Alaska	14,906	257.57	281	143.29	.....	.....	15,187	253.83
Philippine Islands	8,573	682.89	632	545.30	1,068	198.92	10,273	538.36
Alaska	562	501.79	.....	.....	.....	.....	562	501.79
Cuba	303	474.18	.....	.....	.....	.....	303	474.18
Hawaii	1,107	1,045.33	.....	.....	.....	.....	1,107	1,045.33
Total	25,451	340.45	913	269.80	1,068	198.92	27,432	328.49

MEDICAL DEPARTMENT.

The Medical Department consists of a Medical Corps, a Medical Reserve Corps, the Hospital Corps, the Army Nurse Corps, and the Dental Corps.

MEDICAL CORPS.

Authorized strength June 30, 1909	390
Increase January 1, 1910, by act of April 23, 1908	34
Authorized strength June 30, 1910	424
In service June 30, 1909	283
Appointed during year	74
	357
Losses during year	12
In service June 30, 1910	345

On October 1, 1909, 58 candidates who had passed the preliminary examination for appointment in the Medical Corps reported in Washington to take the course of instruction at the Army Medical School. Fifty-three students successfully completed the course of instruction at the school and were graduated May 31, 1910. Fifty of the graduates were recommended for appointment in the Medical Corps of the Army.

Losses during the fiscal year.

	Brigadier-generals.	Colonels.	Lieutenant-colonels.	Majors.	Captains.	First lieutenants.	Total.
Retired		2		6	1		9
Resigned							
Discharged					1	1	2
Died			1				1
Aggregate		2	1	6	2	1	12

PROMOTIONS DURING THE FISCAL YEAR.

The following promotions were made: Four lieutenant-colonels to be colonels; 8 majors to be lieutenant-colonels; 28 captains to be majors; 19 lieutenants to be captains.

The good effect of the increased inducements to enter the Medical Corps provided by the medical department bill approved April 23, 1908, has been apparent during the past year. A great interest in the Medical Corps has been aroused in the profession throughout the United States, as is evidenced by the numerous inquiries with reference to the service in the Medical Corps, and the great number of applicants appearing for the preliminary examinations.

Beginning with November, 1909, preliminary examinations for appointment to the corps have been held the second Monday in each month at San Francisco, Cal., Fort Sheridan, Ill., and Washington, D. C. During the fiscal year ending June 30, 1910, 78 applicants successfully passed the preliminary examinations. Of this number 44 attended the session of the Army Medical School which ended May 31, 1910, leaving 34 who will attend the next session of the school. A preliminary examination will be held on the 18th of July, 1910, at

various army posts throughout the United States, to which at least 130 candidates will be invited to appear. The last examination before the opening of the school will be held on Tuesday, September 6, 1910, and a goodly number of applicants have already signified their intention of taking the examination at this time.

Another evidence of the encouragement given the Medical Corps by the act of April 23, 1908, is the fact that during the year the corps has had no loss by resignation.

Great interest has been manifested in the work of the Medical Department by the members of the Medical Reserve Corps on the inactive list. Several applications have been made to be called into active duty during the summer maneuvers, and I am very glad indeed to note that it has been found possible to comply with this request in one case, thereby establishing a precedent so that in the future medical reserve corps officers can be called into active service during maneuvers, so they can become familiar with the duties they will have to perform when called into active service in an emergency. Besides the official applications that have been made for this special duty, numerous inquiries have been received in the office as to whether it was possible to be ordered to the maneuvers. Until now all these inquiries have been answered in the negative. I consider it of the greatest importance that the policy of calling reserve officers into service for short periods of time at concentration camps, etc., shall be formally established, as it is certainly as of great importance that the medical officers who will be called into service in time of war shall be educated in time of peace, as it is to give similar education to the militia. It is believed that the intention of the act of April 23, 1908, will not be fulfilled unless this policy is carried out.

The method of conducting the examinations of medical officers as authorized by the reorganization bill of 1908, has proved an unqualified success. To date, 12 medical officers have been found disqualified physically, and 9 medical officers have been found professionally disqualified, making a total of 21 officers separated from the service. Two majors have been placed on the retired list after a second examination and one major by reason of physical disqualification. The papers of another major who failed to qualify before a board, are now in the hands of a board of review.

It may be that the examination to determine an officer's fitness for promotion is not a perfect test, but it is the best that has been yet devised, and I believe that the methods of carrying on examinations for promotion of medical officers is by far the best ever introduced into the army.

MEDICAL RESERVE CORPS.

On roster June 30, 1909		364
Appointed during the year		153
		517
Losses:		
Resigned	4	
Discharged	18	
Died	1	
Commissions vacated	74	
		97
On roster June 30, 1910		420

The death was John J. Archinard, December 27, 1909 (on inactive list).

Of the 420 on the roster June 30, 1910, 175 were on active duty, and 245 on the inactive list.

On active duty June 30, 1909		184
Ordered to active duty during the year		96
		280
Relieved from active duty	13	
Commissions vacated	74	
Honorably discharged	14	
Resigned	4	
		105
On active duty, June 30, 1910		175

As noted above, 53 medical reserve corps officers successfully completed the course of study at the Army Medical School and 50 were found qualified for appointment in the Medical Corps. The Medical Reserve Corps has now passed the experimental stage and it is now my purpose to maintain the examinations for appointment in that corps at a standard equal to that required by the licensing boards of the states having the highest standard of medical education.

CONTRACT SURGEONS.

In service June 30, 1909	14
Contracts made during the year	9
	23
Contracts annulled during the year	10
Contracts in force June 30, 1910	13

Of these thirteen contracts, four are temporary and nine are on duty at arsenals, headquarters of military departments, and remount depots, at pay ranging from $75 to $125 per month. Two of the latter are on the inactive list of the Medical Reserve Corps.

DENTAL SURGEONS.

Contracts authorized and in service June 30, 1909	31
Contracts made	3
	34
Contracts annulled	3
Contracts in force June 30, 1910	31

Attention is invited to my report of last year with reference to the inadequacy of the number of dental surgeons now authorized by law if a serious attempt is to be made to furnish dental service for the army.

Since the employment of dentists was authorized in the act of February 2, 1901, numerous bills have been introduced in Congress looking to the permanent organization of a Dental Corps of the Army, giving the members of this corps various grades of rank. All bills introduced to date have been objectionable in one respect or another. During the past winter this office was called upon to give an opinion as to the needs of the army with reference to a permanent dental organization. Before giving an opinion on the subject all the claims and recommendations that had been made to date for the improve-

ment of the dental service were taken into consideration, and it is believed the bill proposed by this office for the commissioning of dental surgeons will meet the requirements in every respect and give to the army an efficient dental service.

The bill submitted recommends that there shall be attached to the Medical Department a dental corps which shall be composed of dental surgeons and acting dental surgeons; that the original appointments to the dental corps shall have the same official status, pay, and allowance as the dental surgeons now authorized by law, and that after three years such acting dental surgeons shall be eligible to appointment in the regular dental corps, after passing in a satisfactory manner an examination prescribed by the Surgeon-General of the Army. After passing this examination an acting dental surgeon is commissioned in the dental corps with the grade of first lieutenant, and shall have rank immediately below all officers of the Medical Reserve Corps, and the pay and allowances of dental surgeons shall be the same as those of first lieutenants, not mounted, including the right to retirement on account of age and disability; and the time served as dental surgeons, acting dental surgeons, or contract dental surgeons shall be reckoned in computing the increase service pay of such as are commissioned in the regular dental corps. The recommendation also limits the number of dental surgeons to 60.

The bill proposed by this office was accepted by the representative of the National Dental Association, and at the time it was recommended to the Secretary of War the then Surgeon-General of the Navy agreed to support a similar proposition for the organization of a dental corps in the navy.

The favorable consideration of the Secretary of War is requested for this bill, which is believed to contain everything necessary for the organization of an efficient dental service.

HOSPITAL CORPS.

Strength June 30, 1909:

Sergeants, first class	299
Sergeants	290
Corporals	18
Acting cooks	151
Privates, first class	1,358
Privates	1,345
Total	3,461

Gain July 1, 1909, to June 30, 1910:

By enlistment	592
By transfer	826
Return from desertion	74

Loss during same period:

By discharge by expiration of term of service	908
By discharge by order	226
By discharge, sentence general court-martial	106
By discharge, surgeon's certificate of disability	76
By transfer to line	32
By retirement	25
By death due to disease	8
By death due to accident	3
Suicide	3
Dropped	3
Deserted	155

In service June 30, 1910:

Sergeants, first class	274
Sergeants	339
Corporals	44
Acting cooks	189
Privates, first class	1,295
Privates	1,267
	3,408

In order to be prepared to fill the vacancies in the grade of sergeant, first class, due to the usual casualties of the service, and to meet the needs of the Army, the examinations required by section 4 of the act of Congress approved March 1, 1887, were held in the military departments in the United States in February, and in the Philippines Division in March, 1910.

Of the 112 applications received from sergeants in the United States, 96 were authorized to take the examination. Of these 96, 18 were not recommended by the local boards, and 78 replies of the candidates are now being examined and rated in this office.

In the Philippines Division 17 sergeants were examined. Three of these were not recommended by the local board, and the replies of 14 are now being examined and rated.

The examination is competitive, and the subjects are: Arithmetic, materia medica, pharmacy, care of sick and war management, minor surgery and first aid, and elementary hygiene.

In the various military departments and also at independent stations frequent examinations were held for promotion to the grade of sergeant, and the 50 additional sergeants allowed in the army appropriation act for 1909 and 1910 were filled by the candidates who received the passing mark.

The 30 additional corporals provided for in the same act have also been appointed during the fiscal year.

The total number of sergeants appointed during the year was 130.

Particular attention is invited to the fact that the present authorized strength of the Hospital Corps (3,500) is inadequate for the needs of the service, and that the department is unable to furnish the men allowed by Army Regulations for posts and independent commands.

This matter was fully discussed in my last annual report (1908–9); the same conditions exist now, and the views expressed and recommendations for relief made then could only be reiterated now. A letter dated July 13, 1910, was addressed to The Adjutant-General on this subject.

The additional work assigned to the Hospital Corps during the last few years has made a fair distribution of its members a matter of considerable difficulty, inasmuch as the department is enjoined to remain strictly within the authorized strength. Under these circumstances it soon became apparent that a temporary reduction in the regulation allowance must be made. The latter course was adopted in October, 1909, when the Secretary of War authorized the reduction of 8 per cent for the different military departments.

The companies of instruction, Hospital Corps, have continued to do excellent work. At my last report Company C, Hospital Corps, was occupying temporarily barracks at Fort Niagara, N. Y. The permanent barrack for this company was completed at the Walter Reed General Hospital, Tacoma Park, D. C., this spring and the company was transferred to its permanent station April 24, 1910.

During the summer of 1909, Company A, Hospital Corps, attended the camp of instruction for militia officers at Sparta, Wis., during July and August, and was afterwards present at the military tournament at Des Moines, Iowa, the 1st of October. One-half of the company arrived at Camp J. M. Dickinson, Grant Park, Chicago, Ill., June 28, 1910, and established a field hospital same date.

Company B, Hospital Corps, was assigned to the camp of instruction for militia officers at the Presidio of San Francisco, Cal., during July and August, 1909, and later returned to its quarters.

Company C, Hospital Corps, left Fort Niagara, N. Y., on July 1 for duty at the military tournament at Toledo, Ohio (Camp William H. Taft). This company at a later date was present at the camp of instruction for militia officers at Antietam, Md., from July 12 to August 14, 1909, on which date it left Antietam for Camp Perry, Ohio, to be present at the rifle test. On September 27 this company attended the military tournament at Albany, N. Y. (Camp Robert Shaw Oliver), and returned to Fort Niagara October 13, 1909. One-half of the company left post June 16, 1910, to participate in the military tournament at Nashville, Tenn. The other half left post June 28, 1910, for duty at camp of instruction, Gettysburg, Pa., arriving there the same date.

Companies A and C are now housed in barracks specially built for company work at Fort D. A. Russell, Wyo., and Walter Reed General Hospital, Takoma Park, D. C., respectively, but the barracks now occupied by Company B on the Presidio reservation is entirely unsatisfactory, and this company can not be expected to perform its full measure of work effectively until suitable barracks have been provided for it. An estimate has been made for the construction of suitable barracks, and it is hoped it will be allowed.

The composition of the corps is as follows:

Sergeants, first class	300
Sergeants	350
Corporals	50
Privates	[a] 2,800
Total	3,500

ARMY NURSE CORPS.

Number of applicants		519
Appointments:		
New	33	
Reappointed	4	
		37
Discharges		32
Number in the Corps on June 30, 1910		96
Serving as follows:		
San Francisco, Cal.	41	
Fort Bayard, N. Mex.	18	
Washington, D. C., attending surgeon's office	2	
		61
Philippines Division:		
Division Hospital, Manila	20	
Zamboanga, Mindanao	4	
Camp Keithley, Mindanao	3	
Fort William McKinley, Rizal	4	
En route to P. I.	2	
En route to United States	2	
		35
		96

[a] About 190 of the 2,800 are acting cooks.

The new superintendent of the Army Nurse Corps, Miss Jane A. Delano, reported for duty on September 10, 1909. Previous to her appointment Miss Delano had been the superintendent of Bellevue and allied Hospitals of New York City, and is the president of the Associated Alumnæ of Nurses of the United States. She therefore brought to her new office a fine executive training and a wide experience with the nursing organizations of the country. In addition to her work as superintendent of the Nurse Corps, Miss Delano is the chairman of the Red Cross Nursing Service of the American National Red Cross, and in this capacity has done very valuable work in enrolling nurses for active service in case of emergency. The Reserve Nurse Corps authorized by the act of February 2, 1901, has not proved attractive to the nursing profession, and the Red Cross nurses now being enrolled will be an effective substitute for it as a reserve of nurses for the Medical Department, if a war should occur.

Certain defects existed in the act organizing the nurse corps of the army which it was necessary to correct. The Secretary of War approved my recommendation for the introduction of a bill into Congress for the reorganization of the corps to correct these defects. It was not practicable to have the last Congress pass the bill presented, but a proviso was added to the army appropriation bill for the fiscal year ending June 30, 1911, embodying all the essential features in the original bill. The changes authorized by this proviso increased the pay of nurses from $40 to $50 per month while on duty in the United States and gave an addition of $10 per month when serving beyond the limits of the United States. It also provided that nurses should receive $55 per month after three years of service; $60 after six years of service; and $65 after nine years of service. The changes authorized also provided for cumulative leave for nurses. With these liberal allowances it is believed that the Army Nurse Corps is now upon a permanent and satisfactory basis. The favorable influence of this legislation was promptly felt in that one hundred nurses—the number authorized by the Secretary of War—were in service on June 1, 1910, the first time the Nurse Corps had had its maximum number since August 1, 1907.

ARMY MEDICAL SCHOOL.

The fourteenth session began October 4, 1909, and closed May 31, 1910.

The number of accepted candidates appointed first lieutenants in the Medical Reserve Corps and admitted to the school was 58, and of medical officers of the militia 1.

The continued increase in the number of student officers as compared to former years is due no doubt to the recent legislation which makes the career of the army surgeon more attractive.

In this connection I desire to state that the class of men who come up and who are finally successful in passing the examination for entrance to the school is better drilled in medicine than formerly. This fact, in my opinion, marks one of the evidences of the great advance which the medical schools of this country have made in recent years in perfecting their methods of teaching.

The equipment of the school, especially in the chemical and clinical microscopy laboratories, has been constantly added to, so that it now

surpasses the outlay usually found in the best of our universities. The work conducted in the Army Medical School is of a postgraduate character, and the aim of the teaching staff has been directed toward a selection of the equipment for the needs of advanced workers in scientific medicine.

There was but one militia officer under instruction at the school this year—Capt. J. M. Stanley, of the Mississippi National Guard—who graduated with good marks. As long as the classes continue as large as they are at present, it is better that the number of students from the militia branch be restricted, because the facilities for instruction are now limited to about 60 men.

Fifty-three candidates completed the course, passed their final examination successfully, and were awarded certificates of proficiency; 1 failed to pass the examination.

The following table shows the subjects taught, the hours of instruction in each subject, and the names of the instructors:

No.	Hours of instruction.	Subject.	Instructor.	Maximum.	Minimum.
1	112	Duties of medical officers, medical department administration, and customs of the service.	Lieut. Col. Wm. H. Arthur. Maj. Chas. R. Reynolds....	1,000	800
2	280	Clinical microscopy and bacteriology.	Maj. F. F. Russell..... Capt. Chas. F. Craig.....	900	720
3	25	Military hygiene	Maj. F. A. Winter.....	800	640
4	18	Military surgery.....	Col. L. A. La Garde.....	800	640
5	24	Military medicine and tropical medicine.	Lieut. Col. W. D. McCaw..	800	640
6	170	Sanitary chemistry.....	Maj. C. R. Darnall.....	600	480
7	58	Hospital corps drill and field work..	Maj. Chas. R. Reynolds....	500	400
8	24	Operative surgery.....	Capt. H. F. Pipes.....	400	320
9	52	Ophthalmology and optometry.....	Lieut. Col. W. D. Crosby..	400	320
10	10	Röntgen-ray work.....	Capt. H. F. Pipes.....	300	240

In addition to the above, the following instruction was also given, viz:

Twenty hours in equitation at Fort Myer, Va., by Second Lieut. Adna R. Chaffee, Fifteenth Cavalry.

A series of 6 lectures on military law, by Gen. George B. Davis, Judge-Advocate-General, U. S. Army, assisted by Lieut. Col. George M. Dunn, Judge-Advocate-General's Department.

A series of 10 lectures on psychiatry at the Government Hospital for the Insane, by Dr. W. A. White, superintendent, Government Hospital for the Insane, and Capt. Robert L. Richards, Medical Corps.

Two lectures on "Personal experiences during the Spanish-American war," by Prof. Chas. B. G. de Nancrede, University of Michigan.

A lecture on "Methods of wound treatment and sterilization appropriate for use in the field," by Dr. Alexius McGlannan.

A lecture on "Sanitary work in Cuba," by Lieut. Col. J. R. Kean, Medical Corps.

The final examination ended May 18, 1910. The marks obtained in each subject and the final aggregate are shown in the merit roll given below.

Five of the student candidates have obtained a general average of more than 90 per cent of all possible marks and are borne on the roll as "Proficient with honor."

The Hoff memorial medal for the highest standing in class was awarded to First Lieut. Henry Beeuwkes, Medical Reserve Corps.

The conduct and deportment of members of the class were at all times excellent.

The class was so much larger than usual, and the amount of clinical material being limited, authority was obtained to dispense this year with the supplementary clinical examination which has been held at the Soldiers' Home Hospital in previous years.

Fifty of the student officers were found to possess satisfactory aptitude for the military service, and that number was accordingly recommended for appointment in the Medical Corps.

The closing exercises were held in the Continental Hall, Daughters of the American Revolution, on May 31, 1910, the address to the class being delivered by Prof. Victor C. Vaughan, of the University of Michigan. The diplomas were awarded by the honorable the Secretary of War, and the Hoff memorial medal was presented by the Surgeon-General of the Army.

The Army Medical School has recently moved from its old quarters in the Army Medical Museum and Library Building in Washington to the new quarters in the large building known formerly as the Builder's Exchange, 721 Thirteenth street NW., between G and H streets. The school will occupy five floors of the building, beginning on the second floor, which will have the administrative offices, the lecture hall, and the locker and dark rooms. The chief feature of the floor above, the third story, is the chemical laboratory. On the fourth floor is the bacteriological laboratory. About 60 students can work at once in each of these laboratories. Four days will be given to bacteriological work and two to chemistry laboratory work. The fifth floor will be given over to the bacteriological laboratory under the direction of Maj. F. F. Russell. Here five rooms will be used by him and his assistants and clerks. On the sixth floor is the room to be devoted to operative surgery. On this floor, too, will be the X-ray apparatus.

Relative proficiency of the graduates of the Army Medical School, session 1909–10.

First lieutenants, Medical Reserve Corps.	Aggregate (maximum 7,000, minimum 5,600).	Remarks.
William H. Allen	6,329	Proficient with honor.
Thomas C. Austin	6,059	
John D. Aydelotte	6,159	
Joseph E. Bastion	6,121	
Harry R. Beery	6,119	
Henry Beeuwkes	6,401	Proficient with honor (medalist).
Albert S. Bowen	6,307	Proficient with honor.
John A. Burket	6,079	
William B. Carr	6,118	
Joseph Casper	6,242	
George W. Cook	6,069	
Alexander T. Cooper	6,125	
Wibb E. Cooper	6,009	
Wayne H. Crum	6,071	
Taylor E. Darby	6,102	
Arthur O. Davis	5,936	
William Cole Davis	5,719	
Charles E. Demmer	6,238	
Ralph G. De Voe	5,883	
George M. Edwards	6,113	
Harry B. Etter	5,652	
Thomas L. Ferenbaugh	5,842	

Relative proficiency of the graduates of the Army Medical School, session of 1909–10—Con.

First lieutenants, Medical Reserve Corps.	Aggregate (maximum 7,000, minimum 5,000).	Remarks.
Owen C. Fisk	5,896	
John P. Fletcher	6,154	
George B. Foster	6,366	Proficient with honor.
James S. Fox	6,070	
Ernest R. Gentry	6,273	
Julian M. Gillespie	5,692	
Charles W. Haverkampf	6,212	
Roy C. Heflebower	6,375	Do.
Felix R. Hill	6,021	
Carl E. Holmberg	6,153	
Robert W. Holmes	5,790	
Glenn I. Jones	6,135	
Edgar C. Jones	6,008	
Thomas H. Johnson	6,260	
Charles T. King	6,204	
Solomon P. Klotz	5,942	
Howard A. Knox	5,866	
Floyd Kramer	5,855	
Edward D. Kremers	6,206	
Larry B. McAfee	6,069	
Everett S. McClelland	5,648	
Condon C. McCornack	6,173	
James R. Mount	6,172	
Edward L. Napier	5,958	
Royal Reynolds	6,034	
Adam E. Schlanser	6,155	
William L. Sheep	5,851	
William H. Thearle	6,222	
Mark D. Weed	6,182	
Edward M. Welles	6,002	
Thomas D. Woodson	6,183	
Capt. J. M. Stanley, Mississippi National Guard	5,686	

GENERAL HOSPITALS.

SAN FRANCISCO, CAL.

This hospital is used as a base hospital for the Philippines and Hawaii and is the largest general hospital, excluding the hospital for tuberculosis at Fort Bayard.

The number admitted during the year, including civilians and military convicts, was 3,003, being an increase of 710 over the preceding year.

Of this number 67 were officers, 2,575 enlisted men, and 353 civilians, including members of officers' families, and 8 military convicts.

The daily average of patients for the year was 270.9. There were 38 deaths during the year, the causes being as follows:

Deaths, causes of, 1909.

1. General diseases:	
(*a*) Infectious—	
Pneumonia, lobar	3
Broncho-pneumonia	2
Acute septicemia and toxemia	2
Puerperal septicemia	1
Tuberculosis—	
Pulmonary	3
General	1
(*b*) Other general diseases—	
Carcinoma of lip	1
Carcinoma of stomach	2
Pernicious anemia	1
General debility and atrophy	1
	17

2. Diseases of the nervous system:		
Meningitis, cerebro-spinal	1	
Softening of the brain	1	
		2
3. Diseases of the circulatory system:		
Endocarditis—		
Acute, ulcerative	1	
Chronic, mitral	2	
Organic heart disease	1	
Aneurysm, thoracic	1	
Heart failure—		
Due to mitral regurgitation	1	
Due to acute alcoholism	1	
		7
4. Diseases of the respiratory system:		
Edema of both lungs		1
5. Diseases of the digestive system:		
Intestinal obstruction	1	
Hepatic abscess	1	
Appendicitis, acute, gangrenous	1	
		3
6. Diseases of the genito-urinary system (nonvenereal):		
Nephritis—		
Acute	1	
Chronic	2	
		3
7. Old age:		
Senile debility		2
8. External causes:		
Gunshot wound—		
Accidental	1	
Homicidal	1	
Suicidal	1	
		3
Total deaths, 1909		38

There were 214 discharges on certificate of disability, the largest number from any one cause being 13 for insanity and the next highest being 12 for neurasthenia.

The following table shows the movement of the sick, together with the principal causes of admission during the calendar year of 1909, civilians being included:

Numerical statement of admissions and dispositions.

	From—		Total.
	Philippine Islands.	United States.	
Remaining in hospital December 31, 1908	45	167	212
Admissions:			
For gunshot wounds	2	7	9
Diarrhea and dysentery	50	19	69
Malarial fevers	11	53	44
Typhoid fever	3	6	9
Rheumatic affections	6	59	65
Venereal diseases	51	627	678
Injuries	26	288	314
Insanity	38	24	62
Alcoholism	3	59	62
All other causes	235	1,456	1,691
Total admissions during the year	425	2,578	3,003
Total admissions to be accounted for	470	2,745	3,215

Numerical statement of admissions and dispositions—Continued.

	From—		Total.
	Philippine Islands.	United States.	
Dispositions:			
Total returned to duty	144	1,928	2,072
Discharged for disability	92	122	214
Discharged per expiration of term	11	14	25
Deaths from all causes	9	29	38
Deserted	4	7	11
Transferred to Hot Springs, Ark.	0	3	3
Transferred to Fort Bayard, N. Mex.	65	26	91
Transferred to Government Hospital for the Insane	30	16	46
Transferred to other hospitals	1	3	4
Otherwise disposed of	32	316	348
Total dispositions during the year	388	2,520	2,908
Remaining in hospital December 31, 1909	82	225	307

An active surgical clinic is maintained at this hospital, the following being a condensed tabular statement of the principal surgical conditions for which operations were performed:

Hemorrhoids	14	Bubo	26
Hernia, inguinal	15	Mastoiditis	2
Hernia, ventral	2	Fistula in ano	4
Appendicitis	21	Gunshot wound	2
Amoebic dysentery (appendicostomy)	1	Cholecystitis	1
Fracture	11	Cholelithiasis	1
Arthritis, tubercular	1	Abscess of liver	2
Varicocele	9	Osteo-myelitis	1
Osteo-sarcoma	1	Tubercular glands	1
Peri-rectal abscess	8	Hydrocele	3
Tuberculosis, testicle	1	Empyema	2

A large laboratory is maintained here for the use of the hospital and for the special work of the posts on the Pacific coast.

The mean strength of the personnel on duty at this hospital for the year was 8.3 officers and 175 enlisted men of the Hospital Corps. Company B, Hospital Corps, was also stationed at this hospital, with a mean strength of 1 officer and 127 enlisted men.

FORT BAYARD, N. MEX.

This hospital, which is intended for the treatment of cases of pulmonary tuberculosis in the army, was commanded during the year by Lieut. Col. George E. Bushnell, Medical Corps.

The following buildings were completed during the year: Steel water tank, capacity 300,000 gallons, and trestle; steam laundry; a medical department storehouse; an addition to the post exchange; three double sets of captains' quarters; one nurses' quarters; one addition to the administration building; and one sewage-purification plant. Appropriations were obtained and preliminary work done during the year for the erection of the following buildings: A new power house, including electric and refrigerating plant; one double and one single ward building; three double sets of captains' quarters and one set of commanding officer's quarters; one double set of hospital corps sergeants' quarters.

It is also contemplated to request an appropriation for the construction of a pipe line to bring water by gravity to the post from certain springs situated on lands recently purchased by the War Department. The present water supply of this post is inadequate, and an additional supply, estimated at 300,000 gallons, which the development of these springs would afford, is badly needed.

During the year a number of old, unsightly, and unsanitary adobe buildings about the post have been torn down, some to make room for new buildings and others for sanitary reasons and to facilitate the policing of the post.

A complete survey is being made for a railroad connection to this post from Bayard Station, 4 miles southeast, on the Atchison, Topeka and Santa Fe Railroad. An effort will be made to secure this connection, which would result in largely increasing the comfort of the patients and others coming to or leaving this hospital and facilitate the new construction and maintenance of this post.

There were 792 total admissions for all causes. Of this number 10 were officers and 441 enlisted men, 275 beneficiaries of the Soldiers' Home, and 66 civilians, including the members of families.

The number of tuberculous cases under treatment December 31, 1908, was 288; on December 31, 1909, 300. The total number of cases of tuberculosis treated during the year was 731. Among the admissions there were 8 cases in which the diagnosis of pulmonary tuberculosis was not confirmed: 1 case of tuberculous cystitis and prostatitis, which was eventually discharged improved; 1 case of tuberculous laryngitis, discharged improved; 2 cases of amputation of thigh in upper portion for tuberculous osteitis of the bones of the leg, discharged improved; 4 cases of suspected pulmonary tuberculosis, which failed to develop.

The cases of pulmonary tuberculosis with complications were as follows:

Pleurisy with effusion	11	Syphilis	12
Chronic alcoholism	3	Tubercular abscess	3
Chronic tubercular laryngitis	44	Cardiac hypertrophy and valvular disease	7
Gonorrhea	4		
Lupus	2	Chronic nephritis	2
Pleurisy fibrinous	27	Fistula in ano	10
Tubercular enteritis	7	Chronic tubercular otitis	9
Rheumatism	4	Tubercular orchitis	4
Catarrhal gastritis	11	Tubercular osteitis	3
Pott's disease	1		

There were 67 deaths, with the following causes:

Pulmonary tuberculosis	54	Septic myocarditis	1
Pulmonary hemorrhage	1	Suicide	1
Chronic tubercular osteitis pelvis	1	Tubercular meningitis	2
Septic peritonitis	2	Gunshot wound	1
Acute yellow atrophy of liver	1	Cerebral hemorrhage	1
Broncho-pneumonia	1	Myocarditis	1

The result of six months or more treatment in 232 cases shows 14.6 per cent apparently cured as compared with 7.67 per cent for the preceding year; 5.6 per cent arrested as compared with 24.28 per cent for 1908 and 38.7 per cent improved as compared with 36.74 per cent for 1908.

Table showing result of treatment in cases in hospital December 31, 1909.

Class.	Number.	Per cent.	Apparently cured		Arrested.		Improved.		Unimproved.	
			Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
Incipient	40	13.3−	4	10	5	12.5	20	50	11	27.5
Moderately advanced	182	60.6+	7	3.8+	15	8.2+	76	41.2+	84	46.1+
Far advanced	78	26	2	2.5+	.....	.....	13	16.6	63	80.7+
Total	300	100	13	4.3+	20	6.6+	109	36.3+	158	52.6+

Table showing results of six months (or more) treatmemt in original cases for 1909.

Class.	Number.	Apparently cured.		Arrested.		Improved.		Unimproved.		Died.	
		Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
Incipient	43	13	30.2+	5	11.6+	14	32.5+	9	20.9+	2	4.6+
Moderately advanced	137	21	15.3+	7	5.1+	60	43.7+	34	24.8+	15	10.9+
Far advanced	52	.....	.....	1	1.9+	16	30.7+	19	36.5+	16	30.7+
Acute miliary	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total	232	34	14.6+	13	5.51	90	38.7+	62	26.7+	33	14.2+

Table showing result of treatment in completed cases, 1909.

Class.	Number.	Apparently cured.		Arrested.		Improved.		Unimproved.		Died.	
		Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
Incipient	70	16	22.8+	41	58.5+	2	2.8+	10	14.2+	1	1.4+
Moderately advanced	247	21	8.5	5	2	175	70.8+	26	10.5+	20	8
Far advanced	114	.....	.....	.....	.....	.....	.....	74	64.9+	40	35
Acute miliary	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total	431	37	8.5+	46	10.6+	177	41	110	25.5+	61	14.1+

In the above tables, cases entering and leaving the hospital more than once during the year (of which there were 431) have each been taken up as a single case, regardless of the number of discharges and admissions in each case.

USE OF TUBERCULIN FOR DIAGNOSTIC PURPOSES.

The commanding officer has called the attention of this office to cases in which tuberculin had been used for diagnostic purposes before the arrival of patients at the hospital, with injurious results, by exascerbating chronic or localized infections. He says:

The indications given for the use of tuberculin always presuppose the fact that the operator is capable of making an absolutely accurate diagnosis of chest conditions previous to its use. There is at the present time an enthusiasm for tuberculin which, to a certain extent at least, I believe to be ill founded, but the most sanguine, not to say reckless, advocates of the use of tuberculin would, I am sure, never recom-

mend its use hypodermically as a diagnostic measure in a case manifesting signs of considerable active pulmonary involvement, regardless of the fact that the sputum diagnosis might be negative.

The use of tuberculin as a diagnostic measure should be left exclusively in the hands of experts in physical diagnosis of the lungs, who would only use it in cases where there is some especial reason for making a diagnosis and in which there are no signs of pulmonary involvement. Personally, I consider the danger so great that although I have been devoting myself to the study of tuberculosis for a number of years and ought to be expert in its diagnosis, I should hesitate long before giving a diagnostic injection of tuberculin.

WALTER REED GENERAL HOSPITAL.

This is the general hospital at Washington, D. C., and also serves as a post hospital for Washington Barracks, D. C., an autoambulance conveying the patients to the hospital from the post at sick call and answering emergency calls.

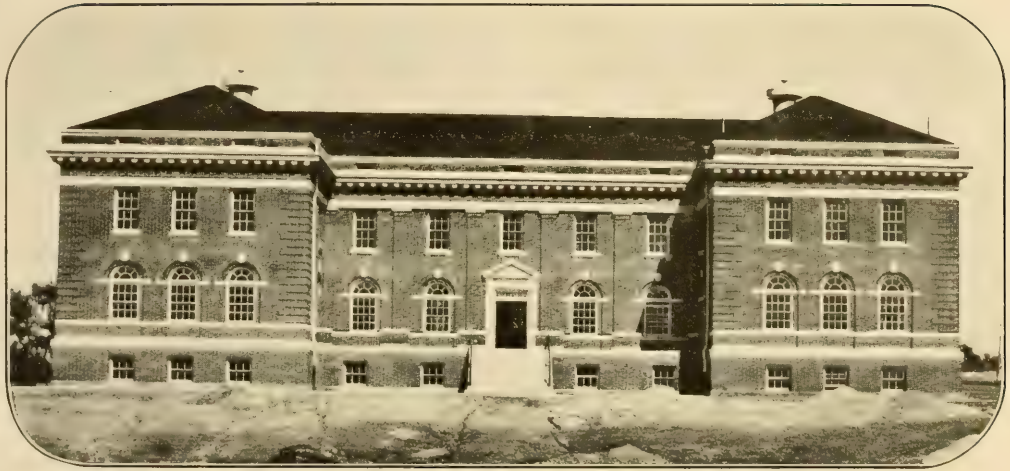
The post hospital building at Washington Barracks, D. C., was occupied until May 1, 1909, when the General Hospital was transferred to the new building on Georgia avenue. The number of cases admitted during the year was 569, being a decrease of 191 from the preceding year. Of this number 315 were medical, 124 surgical, and 130 venereal. Sixty-three were officers, 10 retired officers, 451 soldiers, 18 retired soldiers, 1 discharged soldier, and 26 civilians, including the members of officers' families.

There were 7 deaths, no 2 being from the same cause. There were 26 discharged on certificate of disability. The number of officers on active list admitted was 63, of whom 15 remained under treatment at the end of the year. Ten retired officers were also admitted.

The following table shows the movement of the sick, together with the principal cause of admission during the calendar year of 1909, civilians being included.

Numerical statement of admissions and disposition.

Remaining January 1, 1909	34
Infectious diseases	243
Diseases of the nervous system and organs of special sense	61
Diseases of circulatory system	21
Diseases of the respiratory system	31
Diseases of the digestive system	91
Diseases of genito-urinary system (nonvenereal)	14
Diseases of the skin and cellular tissues	12
Diseases of the organs of locomotion	24
Malformations	1
External causes	68
Undefined diseases	3
Total	603
Disposition:	
Discharged from hospital (duty)	484
Discharged per expiration term of service	4
Discharged from service disability	26
Died	7
Transferred to other hospitals	37
Remaining December 31, 1909	45
Total	603



THE "BARRACKS" FOR HOSPITAL CORPS COMPANY, WALTER REED GENERAL HOSPITAL, TAKOMA PARK, D. C.

An active surgical clinic is maintained at this hospital, the following being a condensed tabular statement of the principal surgical conditions for which operations were performed:

Appendicitis:	
Acute	2
Chronic	8
Amoebic dysentery (appendicostomy)	1
Hemorrhoids	8
Fistulo in ano	1
Hernia:	
Ventral	2
Inguinal	11
Fistula urethral	2
Peritonitis:	
General septic	1
Tubercular	1
Fracture patella	1
Wound external popliteal nerve (neuroplasty)	1
Gumma gangrenous testicle (orchidectomy)	1
Movable spleen (splenectomy)	1
Retroflection of uterus (ventral suspension for retroversion of uterus)	1
Papillomata, uterine	1
Adenitis, inguinal	9
Necrosis, femur	2
Osteo periostitis tubercular	1
Vicious union	2
Cholilithiasis	2
Abscess hepatic tropical	1
Tubercular glands	1
Fractures	2
Pyelitis	1
Perineal fistulo	1
Hypospadias	1

During the year the following auxiliary buildings have been completed: Two single sets of officers' quarters which are now occupied, one by the officer commanding the company of the Hospital Corps and the other by the quartermaster; the hospital corps barracks, a storehouse for the quartermaster, commissary, and medical supplies; a stable, wagon shed, and garage.

Funds for the erection of a building for the Army Medical School at this hospital are to be included in the annual estimate for the fiscal year ending June 30, 1912.

Plans have been completed and contracts let for the erection of a building for nurses' quarters and for a mortuary.

ARMY AND NAVY GENERAL HOSPITAL, HOT SPRINGS, ARK.

This hospital is intended especially for patients having diseases in which hydrotherapeutic treatment is indicated.

The movement of the sick during the year of 1909 at this hospital is shown in the following table, which includes retired and discharged soldiers of the army and navy, both regular and volunteer, as well as those on the active list.

Remaining December 31, 1908	100
Admitted	749
Discharged from hospital	701
Discharged from service for disability	23
Died	18
Transferred to other hospitals	1
Otherwise disposed of	4
Aggregate treated in hospital	849
Remaining December 31, 1909	95

There were 749 admissions during the year. Of this number 198 were on the active list and 551 in the other classes above enumerated.

Included in this enumeration are 26 officers of the army and 4 of the navy on the active list, 11 retired officers of the army, and 8 retired officers of the navy.

The daily average of patients, arranged by months, is as follows:

January	109	July	64
February	106	August	60
March	99	September	75
April	90	October	81
May	108	November	82
June	94	December	104

The causes of admission were in general:

Epidemic diseases	2
General diseases	337
Diseases of the nervous system	106
Eye	2
Circulatory system	26
Respiratory system	11
Digestive system	76
Genito-urinary system	51
Skin and cellular tissue	28
Organs of locomotion	83
Other diseases	9
Injuries	18
Total	749

Among the general diseases are included 306 cases of acute and chronic rheumatism.

Concerning the care of the sick and the administration of the hospital the recommendations of last year are renewed, special emphasis being placed on the need of a building for the officer patients, which should have a ward, private rooms and baths, dining room and kitchen, recreation room, hydrotherapeutic room, electrical treatment room, exercise and massage room, and servants' quarters. The present method of lodging officers in the administration building, permitting them to obtain their meals in town when they are able to walk, and at other times serving them in their rooms meals cooked by soldier cooks and brought from a distant building, is thoroughly unsatisfactory. Other buildings and improvements needed are: One two-story ward for veterans; one additional story on each of wards Nos. 4 and 5; one medical and physical gymnasium; one hospital corps barracks building; one double set of hospital corps sergeants' quarters; an addition to the power house; roads, walks, and grading.

It is not possible to supply the funds for these improvements from the general appropriation, and they should be provided by a special appropriation.

PROVIDENCE HOSPITAL.

The act approved March 4, 1909, having appropriated $19,000 for the support and medical treatment of destitute patients in the city of Washington, D. C., under a contract to be made with Providence Hospital by the Surgeon-General of the Army, the relief afforded was as follows:

Patients in hospital July 1, 1909	105
Admitted during the year	1,185
Total number treated	1,290

Average number admitted per month	108
Number remaining in hospital June 30, 1910	89
Total number of days' treatment afforded	34,999
Average number of days' treatment per patient	27
Average number of patients treated per day	96
Longest term of treatment (days)	242
Shortest term of treatment (days)	1
Number of patients in hospital during the whole year	None.

CONSTRUCTION AND REPAIR OF HOSPITALS.

During the past fiscal year plans and specifications were prepared in this office for new hospitals to be erected at Boise Barracks, Idaho, and Fort Crockett, Tex., and for isolation wards to be erected at Fort Leavenworth, Kans., Fort Riley, Kans., and Fort Slocum, N. Y. Plans and specifications were prepared for enlarging the hospitals at Fort Brady, Mich., Fort Crook, Nebr., Fort D. A. Russell, Wyo., Jefferson Barracks, Mo., Fort Leavenworth, Kans., Fort Logan, Colo., Fort Omaha, Nebr., Fort Robinson, Nebr., Fort Sam Houston, Tex., Fort Sheridan, Ill., Fort Slocum, N. Y., Fort Snelling, Minn., Fort Williams, Me., and Fort Worden, Wash. Improvements were designed for the hospital at Columbus Barracks, Ohio, and for the Walter Reed General Hospital, Takoma Park, D. C. Sketch plans were prepared for a pavilion ward to be constructed of concrete for insane patients at the general hospital, San Francisco, Cal., and for enlarging the hospital at Fort Shafter, Hawaii.

Contracts were entered into for the erection of the new hospitals, including the isolation wards, and for some of the additions and improvements, including a storehouse for the general hospital, Fort Bayard, N. Mex. Some of these additions and improvements have been completed, others are in course of erection, and some are in the market for proposals as they pertain to the appropriation for the next fiscal year. The entire work is progressing in a satisfactory manner, and it is believed that the whole will be under contract in the near future.

Under a special appropriation, buildings are being erected at the general hospital, Fort Bayard, N. Mex., consisting of quarters for twenty army nurses, a laundry building, and three double sets of quarters for officers. The construction of other buildings is also contemplated for this general hospital, the cost of which is to be paid from the same special appropriation.

At the Walter Reed General Hospital the following buildings have been completed or are in course of erection: One hospital corps barrack building, two single sets of officers' quarters, a storehouse, a stable and wagon shed, and a shed and garage, all of which are being paid for from appropriations made for the quartermaster's department. This general hospital was occupied April 30, 1909, and the old hospital at Washington Barracks was turned over to the post authorities, but it is unsuitable for the needs of the garrison at that post and will have to be removed before the barrack building, which is partly erected, can be completed. A new hospital is not needed, as the sick of the command requiring hospital treatment are cared for at the Walter Reed General Hospital, but a small building for dispensary purposes is necessary.

A special appropriation of $60,000 was made by Congress to erect a new and modern hospital at San Juan, P. R., and was reappropriated

for use during the fiscal year, but was not needed, as the War Department is negotiating for an exchange of property with the insular government to secure the building which has been used as a military hospital for more than one hundred years. This hospital is a massive structure of brick, stone, and mortar, occupying the western half of the block which faces the infantry barracks, and with an expenditure of about $10,000 it can be placed in excellent condition.

An allotment of $50,000 was made from the appropriation for construction and repair of hospitals for use in the Philippines Division during the fiscal year, and an allotment of $12,000 was also made from the appropriation for quarters for hospital stewards to cover the cost of quarters for hospital corps sergeants, first class, in the same division. So far as known at this time these allotments were ample for the purposes.

In addition to the foregoing, the hospitals at military posts already established and occupied were improved or kept in proper repair so far as funds would permit. The Army and Navy General Hospital, Hot Springs, Ark., was also provided for, but this hospital needs additional buildings and ground to meet the increased demands being made for accommodations. The following improvements are considered necessary for this general hospital: One officers' ward building; one officers' bath house; one officers' mess hall; one double set of officers' quarters; one two-story ward for veterans; one additional story on each of wards Nos. 4 and 5; one medical and physical gymnasium; one hospital corps barrack building; one double set of hospital corps sergeants' quarters; an addition to the power house; also roads, walks, and grading, together with the necessary plans, surveys, etc.

These improvements are estimated to cost $350,000. Effort is being made to secure additional ground from the Department of the Interior.

In connection with an estimate submitted for new plumbing fixtures desired for the Army and Navy General Hospital to replace unserviceable fixtures which became clogged by a deposit from the water, it was found by an analysis made in this office that the deposit was soluble in a solution of muriatic acid, and a practical test developed the fact that porcelain plumbing fixtures immersed in a 20 per cent solution of the above-named acid for forty-eight hours cleansed them entirely, while lead and iron pipes similarly clogged, immersed in the same solution for twelve hours were thoroughly freed from the deposit without any apparent injury.

Numerous military posts require new hospital buildings to replace old and dilapidated structures which have been in use for many years, and which require large sums of money annually for repairs or improvements. New structures of a modern type would be economical, but it is not possible to erect a suitable modern hospital at any military post for the maximum sum allowed by law to be spent from the general appropriation for such purpose. Section No. 1136, Revised Statutes of the United States, limits the cost of permanent structures to $20,000 unless special authority be first obtained from Congress. This law was enacted in 1853, when material and labor were much lower in price than they are at present, and it is thought that this statute should be modified to suit the changed conditions.

New and improved hospitals should be erected at the following military posts in the near future:

Fort McPherson, Ga.— The hospital at this post is entirely inadequate, is located in close proximity to a railroad, has no cellar except a small excavation for a heating apparatus, which was made some years after the building was erected. The heating and ventilation are not suitable for a modern hospital. The plumbing is crude and efforts have been made from time to time to improve it, but it is far from being in compliance with modern sanitary requirements. The operating room is located in a small annex and adjoins a small laboratory. There is no instrument room, no etherizing room, no preparation or recovery rooms, and no surgical ward. There is no suitable ward for the isolation of contagious diseases and no prison ward, and the hospital corps detachment is quartered in an old temporary wooden building which was erected for use during the Spanish-American war. The mess room and kitchen are too small and are unsuited for their purposes, it being necessary to set tables two or three times to accommodate the inmates. The entire hospital is such that it would be in the interest of economy to replace it with a modern structure. A hospital of sufficient capacity should contain 87 beds for patients and attendants, and the estimated cost of such a building is $90,000. The present building could be advantageously used for other purposes.

Fort Missoula, Mont.—This post has a provisional hospital, of wood, which was erected in 1878. It is entirely devoid of modern appliances, and it would be a waste of funds to undertake to improve it. A regimental post is in course of erection at this fort, and a new modern hospital of sufficient capacity is a necessity which should be supplied. A suitable hospital should have accommodations for 60 patients, 22 hospital corps privates, and 5 noncommissioned officers. The estimated cost of such a building is $90,000.

Post of Washington Barracks, D. C.—This is an engineer post in connection with the Army War College. A small hospital was erected at this station in 1893, became a general hospital in 1898, was abandoned as such upon the completion of the Walter Reed General Hospital in 1909, and is to be torn down for the purpose of securing room to complete a barrack building which is now partly erected. Some provision should be made for sick call, administrative purposes, and for the temporary care of the sick at this post. It is believed that a central infirmary, with one small ward, a receiving room, office, etc., to care for the sick until such time as the patients can be moved to the Walter Reed General Hospital, will answer the purpose. A suitable infirmary building in keeping with the other buildings at the post is estimated to cost $25,000.

Fort Logan H. Roots, Ark.—The hospital at this post is inadequate and obsolete. It has no cellar and was originally heated by stoves, but a small cellar was constructed under an outbuilding for a heating plant. This is unsatisfactory on account of the distance of the boilers from the building, which necessitated the laying of pipes under the porches and open foundation, causing the loss of a large amount of heat, so that it is almost impossible to secure a comfortable temperature in the hospital during even moderately cold weather. Plans and specifications were prepared in this office for a small addition to this hospital with a view of better adapting it for use, but the lowest bid received was over $38,000. Owing to the fact that the building

is far from being modern or suitable, that the heating and ventilation are unsatisfactory, that there is no cellar, no modern operating room, that the addition, even if authorized, would not modernize it, and that the hospital would continue to be a source of complaint and expense, it was decided to recommend the rejection of all proposals, to recall the plans and specifications, and to ask for sufficient funds to erect a modern hospital of suitable capacity. The hospital at this post should have accommodations for 18 patients, 8 hospital corps privates, and 2 noncommissioned officers. The high cost of material, labor, and transportation at this post renders building expensive, and it is estimated that $50,000 will be required to erect a modern hospital on the high bluff where this post is located.

Fort Hamilton, N. Y.—In 1904 the commanding officer of this post stated that the present post hospital was entirely inadequate for the needs of the garrison, that there was insufficient space for attendants, that there was no isolation ward and no prison ward, and that in the rearrangement of the post a better site had been selected. In 1906 the chief surgeon, Department of the East, stated that the hospital at Fort Hamilton was very badly located, standing on rather low ground, and facing at a distance of 14 yards a noisy public highway, on the other side of which were saloons and other objectionable places of public resort. In view of these circumstances it is believed that the interests of the service will be best subserved by erecting a modern hospital on a more appropriate site, especially so as it is proposed to use the present building for a band barrack. A hospital of sufficient capacity for this post should contain accommodations for 40 patients, 16 hospital corps privates, and 4 noncommissioned officers, and the estimated cost of such a building is $60,000.

Fort Benjamin Harrison, Ind.—One ward wing and the administration building of a modern hospital have been erected at this post, but the building has not been completed. It lacks one ward wing and a rear annex. It is insufficient in capacity, and in March, 1909, the surgeon recommended that the hospital accommodations at this post be doubled. The chief surgeon, Department of the Lakes, stated it is important that the hospital at Fort Benjamin Harrison be completed at an early date, as the hospital facilities are inadequate even for the regular garrison, and are entirely so under present circumstances or when this post is used as a base for the maneuver camp. One wing and the annex of the standard plan are yet lacking; in a word, less than half the hospital has been completed. The department commander stated that this hospital should be completed by adding the other wing and rear annex required for the standard plan for a 60-bed hospital. To complete this hospital by adding the other ward wing and rear annex is estimated to cost $40,000.

Fort H. G. Wright, N. Y.—This post is being enlarged by the erection of new batteries, new buildings, etc., and the ultimate strength of the garrison is to be 7 companies of coast artillery. The present hospital building is in close proximity to the batteries and is unsuitable for occupation as a hospital. It is also entirely inadequate, but it is proposed to use the building as a band barrack and to erect a new modern hospital of sufficient capacity on a suitable site removed from disturbance by gun fire. The enlarged garrison will require

hospital accommodations for 40 patients, 16 hospital corps privates, and 4 noncommissioned officers, the estimated cost of such a building being $60,000.

Fort Niagara, N. Y.—The hospital at this post has 13 beds and the garrison is to consist of 8 companies of infantry. This will require hospital accommodations for 32 patients, 15 hospital corps privates, and 4 noncommissioned officers. It is proposed to enlarge this hospital by adding another ward for 12 beds and a rear annex to contain kitchen, mess hall, hospital corps dormitory, prison ward, isolation ward, etc., and the estimated cost of these improvements is $35,000

Fort George Wright, Wash.—The hospital at this post is inadequate and is not complete. It consists of two ward wings and an administration building, and it is proposed to enlarge the capacity by adding the rear annex which was omitted when the building was erected. This will contain the kitchen, mess hall, hospital corps dormitory, prison ward, isolation ward, etc., and the estimated cost of this improvement is $25,000.

Owing to the increase in Coast Artillery and the concentration of companies at various posts it is necessary to increase the hospital accommodations by enlarging the buildings. It is estimated that $100,000 will be required for this purpose.

Isolation wards.—Seven of these detached wards have been authorized, one of which has been completed, three are in course of erection, and three remain to be contracted for. In my opinion, three of these buildings should be provided each year until all the regimental and large artillery posts are supplied, as these buildings are absolutely necessary for the proper treatment of contagious diseases.

In addition to the foregoing, plans and specifications were prepared in this office for hospital corps sergeant's quarters authorized for Columbus Barracks, Ohio, Jefferson Barracks, Mo., Fort Leavenworth, Kans., Fort Slocum, N. Y., and the Walter Reed General Hospital, Takoma Park, D. C. These are all double sets of quarters, and those at Columbus Barracks, Ohio, Jefferson Barracks, Mo., and the Walter Reed General Hospital have been completed. The others are in course of erection and are nearing completion. A number of large military posts are in need of these double sets of quarters, and the appropriation should be liberal until such time as the hospital corps sergeants are supplied with suitable habitations. All the quarters at military posts already established and occupied have been repaired, improved, and kept in good condition so far as funds would permit.

MEDICAL AND HOSPITAL SUPPLIES.

The sum of $700,000 was estimated for the appropriation "Medical and Hospital Department" for the fiscal year 1910. This amount was appropriated by Congress, and would have been adequate to the needs of the department but for the loss sustained by the burning of the New York medical supply depot on February 4, 1910. The stock on hand was practically all destroyed by this fire, entailing to the department a money loss of about $367,000. This loss was covered by the appropriation of a like amount by Congress in the general deficiency bill.

It became necessary to anticipate this appropriation, to the extent of about $100,000, in order to meet the current needs of the department. This was done by authority of the Secretary of War, under the provisions of the act for the support of the army, fiscal year 1906. The fire at the depot was investigated by a board of officers, and no satisfactory explanation of its origin was determined.

The supply depot has been newly located in a thoroughly fireproof building, at 543 Greenwich street, New York City, and it may be safely assumed that the possession of this character of storehouse will obviate embarrassments which have come to this department by fires. This recent fire is the second to occur at the depot within the past two years, the first being in 1908, and each causing very large losses.

The policy of assembling field supplies has been continued, the expenditure for the year for this purpose amounting to $52,206.29. The problem of storing this equipment has been met in part by securing from the Quartermaster's Department a larger storehouse at the powder depot, St. Louis, Mo., in lieu of one occupied up to the present time. This change made available to the Medical Department about 30,000 cubic feet of additional space. This relief, however, is only temporary; the department is only approximately equipped for field service, and if it is to be adequately prepared for such service, additional storeroom must be provided for the materials necessary for the equipment. It has been repeatedly demonstrated that it is practically impossible to procure this material in the short time available for its purchase when war supervenes. A project to procure a new storehouse of modern construction and increased storage facility in this city without additional cost is under way, but has not, up to this time, taken definite shape. It is proposed to locate this storehouse near the present quartermaster's storehouses, at Eckington, D. C., and if the plan is consummated it will result in much greater facility for handling stores for shipment.

During the year medical supplies to the value of $51,777.82 were shipped to Manila, in addition to $60,000 disbursed in the division of the Philippines under the direction of a chief surgeon.

The new ambulance has been finally approved as recommended by the transportation board, and 100 of these vehicles are now being built by the Quartermaster's Department under contract. The Quartermaster-General has engaged to furnish 100 of these vehicles each year until 500 have been accumulated, unless conditions should require a more speedy line of policy. The travois and travois harness have been definitely selected, and 20 sets of this equipment were purchased and sent out to hospital corps companies during the year for trial and report of their suitability for the service.

Litter fittings for railway (freight) cars have been considered by the transportation board, and it has adopted a set of fittings made in this country at a cost of $12 per set. Each set accommodates three litters and 8 sets may be placed in an ordinary box car, providing suitable facilities for the transportation of 24 recumbent men. It is a matter of congratulation that this device places within the control of the department a cheap means of converting ordinary box cars for the safe and comfortable transport of sick and wounded. The transportation board has recommended the purchase of 500 sets of these fittings, and the matter is now under consideration by the Quartermaster-General.

The medical and hospital stores provided for the army continue of a high standard and are found to be an economical, attractive, and convenient source of supply for other branches of the public service, notably the organized militia and the Isthmian Canal Commission. Transfers of army medical stores for such public use have been made in considerable quantity during the year. These transfers can now be made without detriment to the supply of the army, as the value of the stores is in due season reimbursed to appropriations under the control of the Surgeon-General, and under existing law (act June 12, 1906, 34 Stats., 256) remains available for a year or more to replace them. The transfers in question, and other authorized dispositions of serviceable medical property, are exhibited in detail in the following table:

A. Supplies issued to States and Territories for the use of the organized militia, under section 1661, Revised Statutes, and appropriations supplementary thereto:		
Arizona	$35.50	
Arkansas	255.74	
California	861.75	
Colorado	177.50	
Connecticut	266.63	
Delaware	133.22	
District of Columbia	394.76	
Florida	25.69	
Georgia	515.78	
Illinois	399.98	
Indiana	1.25	
Iowa	636.54	
Kentucky	440.40	
Louisiana	898.37	
Maine	958.05	
Maryland	539.93	
Massachusetts	3,128.66	
Michigan	30.79	
Missouri	215.20	
Montana	133.13	
Nebraska	625.86	
New Hampshire	437.84	
New Jersey	1,095.81	
New Mexico	85.38	
New York	10,867.74	
Ohio	3,674.05	
Oregon	255.60	
Pennsylvania	1,991.75	
Rhode Island	56.34	
South Carolina	577.24	
Tennessee	1,393.63	
Texas	480.50	
Vermont	167.37	
Virginia	266.40	
Washington	177.50	
West Virginia	563.76	
Wisconsin	421.22	
Wyoming	152.83	
		$33,339.69
B. Sales to States under section 17, act of January 21, 1903 (32 Stats., 778):		
Missouri	$18.81	
Pennsylvania	201.94	
Wisconsin	173.01	
		393.76

C. Supplies transferred to other bureaus and departments of the Government:		
Isthmian Canal Commission	$22,126.15	
Alaska Road Commission	31.67	
Engineer Department, U. S. Army	280.00	
Quartermaster's Department, U. S. Army	315.11	
Navy and Marine Corps	1,442.31	
Forest Service	177.50	
		$24,372.74
D. Sales to the civil government of the Philippine Islands		476.01
E. Sales to civilian employees of the army and civilians		2,634.84
Total		61,217.04

LABORATORIES.

The laboratories at the Army Medical Museum, at the General Hospital, San Francisco, Cal., at Fort Leavenworth, Kans., and at Manila, P. I., have been equipped with men and materials for the examination of water supplies for the posts for their respective territories. They also carry out the clinical laboratory tests for the same posts and have thus relieved the laboratory of the Army Medical School of considerable work which can be done more promptly and with better results, as now less time elapses between the collection of the material and its examination. This has proved to be a very important matter in the case of the examination of the excreta from typhoid patients as the *Bacillus typhosus* dies out as a rule in both feces and urine after about forty-eight hours. During the coming year it is expected that these laboratories will be in a position to make the serum test for syphilis and to carry out pathological examinations of diseased tissues for all the posts in their districts.

The laboratory in Manila has been equipped for the manufacture of antityphoid vaccine in order that troops serving in the Philippines may have their requisitions filled promptly.

Summary of laboratory work at the Army Medical Museum for year ending June 30, 1910.

Examinations of typhoid cases	2,545
Cases of typhoid	72
Convalescents	102
Suspects, for diagnosis	132
Suspected carriers	351
Widals:	
Negative	143
Positive	168
Blood cultures:	
Negative	55
Positive	3
Blood cultures from clots:	
Negative	157
Positive	5
Feces:	
Negative	1,007
Positive	35
Urine:	
Negative	956
Positive	12
Bile, human for typhoid, negative	1
Dysentery, from feces:	
"Flexner," positive	1
"Y," positive	2

Clinical laboratory examinations for year ending June 30, 1910.

Blood counts	33
Differential counts	18
Malaria, examination for	25
Urinalyses	222
Sputa, examination of	36
Feces, examination of	12
Bacteriological of water	26
Cultures of pus, exudates, etc	58
Animal inoculations for sera, diagnosis, etc	149
Autogenous vaccines prepared	47
Histological examinations of operative and p. m. tissues	251
Widals	12
Miscellaneous smears, etc	12

REPORT UPON THE WASSERMANN TEST.

The Noguchi modification of the Wassermann test has been used in this laboratory and has proven most satisfactory.

The total number of cases examined to June 30, 1910, has been 547, of which 227 were positive and 320 negative. The cases may be divided into the following classes: (1) Those in which the diagnosis was lues or suspected lues; (2) those in which the diagnosis or clinical symptoms were those of some other disease; (3) those in which lues could be positively excluded.

Class I. Cases in which the diagnosis was lues or suspected lues.—Of this class there were 299 individuals examined, with a positive result in 227, or 75.9 per cent. The following table gives the results in the various stages of the disease:

Stage of disease.	Cases.	Positive.	Negative.	Per cent positive.
Primary	67	43	24	64
Secondary	135	115	20	85
Tertiary	46	35	11	76
Latent	43	27	16	62.7
Congenital	8	7	1	87.5
Total	299	227	72	75.9

Class II. Cases in which the diagnosis or clinical symptoms were those of other diseases than lues.—Of this class there were 178 individuals examined, with a positive result in three cases. Of the three cases two were suffering from malarial fever of tertian type, and were examined during the febrile stage, while the other positive result was obtained in a case of frambœsia. A positive result in malarial fevers and in frambœsia has been obtained by several workers using the original Wassermann technique in both these diseases, so that the error is not inherent in the Noguchi modification.

Class III. Cases known not to be luetic in nature.—The test has been applied to 70 healthy individuals in whom lues could be positively excluded, with a negative result in every case.

The following table gives the date of the appearance of the reaction in 31 cases tested within thirty days after the appearance of the initial lesion.

TABLE NO. II.—*Date of appearance of positive reaction in 31 cases of lues.*

Days after initial lesion.	Cases positive.	Days after initial lesion.	Cases positive.
5	1	20	1
8	2	21	2
11	2	22	1
13	3	23	1
14	1	25	2
17	2	28	1
18	2	29	2
19	2	30	6

The reaction may have been present in any of these cases before we tested the blood, the table giving the first examination made in every case. It will be observed that the earliest reaction was obtained five days after the appearance of the initial lesion, while in the majority of the cases the reaction appeared within two weeks after the appearance of the initial lesion.

The following table gives the results obtained with the complement fixation test at various periods after the appearance of the initial lesion:

TABLE NO. III.—*Result of complement fixation test at various periods after initial lesion*

Days after initial lesion.	Positive.	Negative.	Days after initial lesion.	Positive.	Negative.
32	1	.....	150	1	.....
33	1	.....	180	4	.....
34	.....	1	210	2	.....
35	2	.....	270	2	.....
38	1	.....	300	1	.....
42	2	.....	330	1	.....
46	2	.....	365	5	.....
49	1	.....	380	1	.....
50	1	.....	547	1	.....
55	1	.....	730	3	.....
60	2	1	912	1	.....
70	2	.....	1,095	1	.....
72	1	.....	1,460	2	.....
87	1	.....	1,825	2	.....
90	7	1	2,190	2	.....
99	1	.....	2,555	1	1
100	1	.....	2,920	1	1
110	4	.....	3,650	1	.....
120	4	.....	4,015	1	.....
144	1	.....			

The effect of treatment is shown in the following table:

TABLE NO. IV.—*The result of specific treatment upon the complement fixation test.*

Time treated.	Cases.	Positive.	Negative.	Time treated.	Cases.	Positive.	Negative.
2 weeks	2	1	1	40 weeks	1	1	.....
4 weeks	1	.....	1	1 year	4	1	3
6 weeks	2	1	1	14 months	3	1	2
8 weeks	3	2	1	15 months	1	1	.....
10 weeks	1	1	.....	18 months	2	2	.....
12 weeks	4	3	1	2 years	6	5	1
16 weeks	1	1	.....	30 months	1	1	.....
24 weeks	4	3	1	3 years	2	.....	2
28 weeks	3	1	2	8 years	1	1	.....
32 weeks	4	1	3	12 years	1	1	.....
36 weeks	5	4	1				

Total cases, with treatment, 52; positive, 32; negative, 20; per cent, 61.

This table is of interest both in showing how quickly the reaction may disappear after specific treatment is instituted and how long it may persist despite treatment. It will be observed that negative results were obtained in as short a period as two weeks after beginning treatment, while no less than 12 of the negative results were obtained in patients who had been under treatment for less than one year. This fact demonstrates that a negative reaction can not be regarded as an indication that the infection is cured, for if the treatment be discontinued the reaction will reappear in most of these patients. It can, however, be used as an index of the efficiency of treatment. The table also demonstrates that irregular or careless treatment has but little effect, for in almost all of our cases in which the reaction had persisted after treatment it was found that the methods had been faulty or that the treatment had been taken at irregular intervals.

Summary of laboratory work at Fort Leavenworth, Kans., from January 15 to December 31, 1909, inclusive.

Number of typhoid cases	156
Suspected typhoid carriers	17
No typhoid bacilli found	12
Typhoid bacilli found	3
Paratyphoid bacilli found	2
Typhoid cases which have shown positive reaction in either blood culture, agglutination, feces, or urine	46
Typhoid cases which have shown negative reaction in either blood culture, agglutination, feces, or urine	110
Total number of examinations made, in typhoid cases, of:	
Feces	225
Positive	19
Negative	206
Urine	228
Positive	16
Negative	212
Blood cultures	7
Positive	4
Negative	3
Agglutinations	149
Positive	93
Negative	56
Clinical laboratory examinations:	
Red blood cell and leucocyte counts	26
Differential counts	44
Examinations for malaria	204
Urine analysis	320
Examinations of sputa	160
Examinations of feces	59
Examinations of water	75
Food analysis	9
Pathological examinations	10
Autopsies	3
Gland contents	1
Miscellaneous	18

Summary of laboratory work at Army General Hospital, San Francisco, Cal.

Examinations:		Skin scraping	35
Blood—		Tissue scraping	28
Counts	1,362	Fluids obtained by aspiration	25
Malaria	516	Serum for treponema	38
Widal	116	Stomach contents	82
Urine	3,469	Miscellaneous	12
Sputum	1,987	Water analyses	29
Feces	539	Milk analyses	20
Pus	285	Guinea-pig inoculations	13
Culture	132	Autopsies	30

The table does not include typhoid work. Widal tests were made from January 1 to May 1, when more systematic typhoid work was begun.

LIBRARY OF THE SURGEON-GENERAL'S OFFICE.

The question of adequate space for the ever-growing library was beginning to be of grave concern when new quarters were secured for the Army Medical School, and enough room vacated by its removal to accommodate the new material of the library and museum, and also to provide much-needed space for the chemist and the architect of the office and to fit up two rooms for the use of examining boards, which are practically in continuous session.

The building occupied by the library and museum is in need of rather extensive repairs, and some renovations are required upon sanitary grounds. Estimates for an appropriation for this purpose have been submitted.

The historical collection of medical classics selected for exhibition from the vast store of books in the library is completed and includes about 300 volumes, nearly every one of the first edition. Such an exhibition, illustrating the progress of medicine from Hippocrates to Schaudinn, is of interest to both medical men and lovers of rare books. It is doubtful if any other library in the world could duplicate it. The historical collection proper begins with Hippocrates, but modern transcriptions of the Ebers papyrus, the Charaka-Samhita, the Susruta, and the Code of Hammurabi are shown, giving the earliest records of Egyptian, Aryan, and Babylonian medicine.

The volumes of the Greek and Latin masters are also superb specimens of the early printers, the Aldine editions of Hippocrates, Galen, Celsus, Ætius, Paulus Ægineta, Oribasius, and Leonicenus, the Elzevirs of Hippocrates and Celsus, and the Frobenius imprints of Hippocrates and Ætius, with the characteristic bindings of stamped pigskin.

Mohammedan medicine is represented by the Arabic texts of Avicenna, Rhazes Albucasis, and Abu Mansur; early Jewish medicine by the rare Florence imprint of Moses Maimonides (1478).

Early anatomy is exemplified by such works as the Melerstat Mundinus of 1493, the Viennese reprint of Ricardus Anglicus, various editions of Ketham, and the stately first edition of the "Fabrica" of Vesalius, from the press of Oporinus, at Basle (1543), this copy having on a fly leaf an autograph Latin poem by Melancthon. The library also possesses the rare "Epitome" of the same work issued the previous year (1542), containing the plates commonly ascribed to Titian.

The progress of anatomical illustration is to be seen in selected cuts and plates in the works of Mundinus, Ketham, Peyligk, Hundt, Dryander, Stephanus, Valverde, Casserius, Bidloo, Cheselden, William Hunter, and Scarpa, while artistic anatomy is shown by the drawings of Leonardo da Vinci and Raphael and the original engravings of Albrecht Dürer and John Flaxman.

In medieval surgery are to be seen the treatises of Roger of Parma [in manuscript], Salicetus, Lanfranc, Vigo, Ypermans, Pfolspeundt, Braunschweig Gersdorff; in medieval obstetrics the first four editions of the "Rosengarten" of Rosslin with the English translation of Raynalde. The leading examples of early English medicine,

Gilbertus Anglicus, John of Gadesden, Bernard de Gordon, and John Arderne are in the medieval collection; the last is a rare manuscript of the fourteenth century.

Sixteenth-century medicine is represented in the works of Paracelsus, Ambroise Paré, Fracastorius Sanctorius, and Cornaro; the seventeenth, by the classics of Harvey, Athanasius Kircher, Glisson, Descartes, Swammerdam, Leewenhoek, Sydenham, and Malpighi. The eighteenth century includes the names of Boerhaave, Haller, van Swieten, Winslow, Morgagni, Auenbrugger, Jenner, and John Hunter, and the nineteenth and twentieth centuries are prominent for the works of Bichat, Pinel, Bell, Magendi, McDowell, Laennec, Louis, Beaumont, Skoda, Helmholtz, Claude Bernard, Daniel Drake, Marion Sims, Virchow, Semmelweis, Pasteur, Lister, Cohnheim, Koch, Laveran, Behring, Walter Reed, and Fritz Scaudinn.

This small collection for exhibition of course is only the smallest fraction of the rarities of the library, but it represents very well the landmarks of medicine from its beginning and throughout its progress.

There were presented to the library during the year 309 books and 3,536 pamphlets and journals. A noteworthy gift is the beautiful reprint of Vesalius "Tabulae Anatomicae Sex," Venice, 1538, in elephant folio, one of 32 copies made for Sir William Stirling-Maxwell and presented to the library by his son, Sir John Stirling-Maxwell. It is believed to be the only copy in the United States. Of the original only two copies are known to exist, and we owe also the possession of this reprint to the life-long friend of the library, Dr. William Osler, who requested Sir John Stirling-Maxwell to give one of the 6 remaining copies to us.

The late Thomas Windsor, of Manchester, England, a well-known bibliophile and an old correspondent and friend of the Surgeon-General's Library, has left to it by will such of his medical books as are needed to fill vacancies.

The following table shows the additions made to the library during the year 1909–10:

	On hand June 30, 1909.	Added during fiscal year.	Total June 30, 1910.
	Volumes.	*Volumes.*	*Volumes.*
Medical journals	52,571	1,052	53,623
Medical transactions	8,386	224	8,610
Bound theses	2,604	.....	2,604
Bound pamphlets	3,092	.....	3,092
Other medical books	102,226	2,115	104,341
Total	168,879	3,391	172,270
Medical theses	81,627	2,140	83,767
Medical pamphlets	215,933	5,008	220,941
Total	297,560	7,148	304,708

ARMY MEDICAL MUSEUM.

The total number of specimens in the museum at the close of the fiscal year, June 30, 1910, is 34,358.

The following statement shows in detail the additions and changes in the different sections:

Pathological section:		
In museum June 30, 1909		12,975
Discarded		96
		12,879
Received during the year		73
In museum June 30, 1910		12,952
Anatomical section:		
In museum June 30, 1909		1,200
Donated		19
		1,181
Received during the year		5
In museum June 30, 1910		1,186
Section of comparative anatomy:		
In museum June 30, 1910		694
Microscopical section:		
In museum June 30, 1910		12,916
Miscellaneous section:		
In museum June 30, 1909		3,085
Discarded		7
		3,078
Received during the year		88
In museum June 30, 1910		3,166
Provisional pathological section:		
In museum June 30, 1909		546
Donated		24
In museum June 30, 1910		522
Provisional anatomical section:		
In museum June 30, 1910		378
Photographic section:		
In museum June 30, 1910		2,544

RECAPITULATION.

Specimens in museum June 30, 1909	34,338
Discarded and donated	146
	34,192
Added during the year	166
In museum June 30, 1910	34,358

The following are some of the more interesting specimens in the pathological section, received during the year ending June 30, 1910:

Malformations.—Specimen 14156, a hemiteras at 6½ months; donated by Dr. Mary Parsons, Washington, D. C. Specimen 14116, a twin fetus at 6 months and its fellow, the development of which had ceased at about the fourth month; donated by Dr. R. A. Logan, Washington, D. C. Specimen 14115, a papyraceous fetus at about the third

month, delivered at term with a fully developed fetus; donated by Dr. L. Tayler-Jones, Washington, D. C.

Parasites.—Specimen 14154, trichina spiralis in human biceps muscle; donated by Dr. Maude Abbott, Montreal, Canada. Specimen 14152, fluke worms from human subjects; donated by Dr. Max Askanazy, Geneva, Switzerland.

Injuries.—Specimen 14093, a shot fracture of thoracic vertebræ and corresponding ribs with destruction of spinal cord, from a soldier who died two minutes after the injury; donated by Maj. C. P. Robbins, Medical Corps, U. S. Army. Specimen 14107, shot fracture of bones of leg; amputation; donated by Dr. E. P. Magruder, Washington, D. C. Specimen 14141, shot perforation of lung; from a soldier; death from hemorrhage into the pleura; donated by Lieut. Howard Priest, Medical Reserve Corps. Specimen 14118, laceration of thoracic spinal cord by a fall; from a soldier; laminectomy was done, but he died of ascending myelitis; donated by Lieut. Col. William Stephenson, Medical Corps, U. S. Army.

Dysentery.—Specimen 14096, colon from case of amebic dysentery; donated by Capt. H. J. Nichols, Medical Corps, U. S. Army. Specimen 14138, colon from case of amebic dysentery; there was an amebic abscess of the liver; donated by First Lieut. Howard Priest, Medical Reserve Corps. Specimen 14092, colon from a case of acute specific dysentery; received from the Board for Study of Tropical Diseases. Specimen 14091, colon from case of acute specific dysentery, in a soldier; from the Board for Study of Tropical Diseases.

Pellagra.—Specimen 14095, showing the lesions of the hands; donated by Capt. H. J. Nichols, Medical Corps, U. S. Army.

Madura foot.—Specimen 14122; from a Filipino, age 25; amputation of leg; from the Board for Study of Tropical Diseases.

Brain.—Specimen 14090, showing tuberculosis; donated by Dr. G. N. Acker, Washington, D. C.

Thyroid gland.—Specimen 14119, adenoma; removed from a man, age 47; donated by Dr. E. M. Hasbrouck, Washington, D. C.

Diaphragmatic hernia.—Specimen 14094; donated by Dr. J. W. Mitchell, Peoria, Ill.

Greater omentum.—Specimen 14102, cancer; removed from woman, age 52, by operation; donated by Dr. E. M. Hasbrouck, Washington, D. C.

Stomach.—Specimens 14111 to 14114, sarcoma of stomach, left kidney, spleen, and lung, limited to left side of body; right side not affected; from a man, age 67; donated by Dr. G. C. Ober, Washington, D. C. Specimen 14120, cancer of pylorus; gastro-enterostomy was done; from a man, age 47; donated by Dr. W. G. Morgan, Washington, D. C.

Intestines.—Specimen 14131, stricture of the ileum, apparently syphilitic; donated by First Lieut. Howard Priest, Medical Reserve Corps, U. S. Army. Specimen 14135, tubercular ulceration and perforation of the ileum; death from septic peritonitis; donated also by Lieutenant Priest. Specimen 14144, tumor of colon that sloughed into the bowel; soldier; 14145 is a sago spleen from the same case; donated by Maj. W. D. Webb, Medical Corps, U. S. Army. Specimen 14087, adenoma of colon, removed from soldier by operation; recovery; donated by Capt. B. H. Dutcher, Medical Corps, U. S. Army.

Liver.—Specimen 14139, amyloid degeneration consecutive to tuberculosis of bones of pelvis; donated by First Lieut. Howard Priest, Medical Reserve Corps.

Pancreas.—Specimen 14150 and 14151, acute hemorrhagic inflammation; from a man, age 60; donated by Dr. G. T. Vaughan, Washington, D. C.

Spleen.—Specimen 14097, spleen much enlarged, weight 7 pounds 9 ounces; from a case of leukemia; removed after death; donated by Lieut. Col. W. D. Crosby, Medical Corps, U. S. Army. Specimen 14148, large spleen from case of Banti's disease; donated by Dr. J. F. Mitchell, Washington, D. C.

Kidney.—Specimens 14088 and 14089, kidney and large calculus removed because of pyelonephritis; donated by Dr. J. T. Kelley, Washington, D. C. Specimen 14158, miliary abscesses of kidney; from a case of puerperal metritis; donated by Dr. D. S. Lamb, Army Medical Museum.

Urethra.—Specimen 14142, phosphatic calculus removed from urethra of Filipino; donated by Capt. W. A. Powell, Medical Corps, U. S. Army.

Testes.—Specimen 14103, gumma; removed from soldier; recovery; donated by Capt. H. F. Pipes, Medical Corps, U. S. Army. Specimen 14101, dermoid cyst of testis, removed by operation; donated by Dr. W. P. Carr, Washington, D. C.

Uterus.—Specimen 14155, uterus cordiformis, with embryo; removed by operation; donated by Dr. S. R. Karpeles, Washington, D. C.

Round ligament.—Specimen 14104, cyst of round ligament; removed by operation; donated by Dr. S. R. Karpeles.

Orbit.—Specimen 14086, sarcoma of orbit; removed by operation; donated by Dr. V. H. Esch, Washington, D. C.

Ear.—Specimen 14098, chronic otitis media; temporal bone trephined because of abscess and infecting sinusitis; secondary abscess of lung, 14099; donated by Dr. W. K. Butler, Washington, D. C.

In the anatomical section there were received five preparations, specimens 4099 to 4103, showing artificial injection of blood vessels; made and donated by Dr. Edmond Souchon, New Orleans, La.

In the miscellaneous section were the following: Specimen 3225, model of window tent devised by Dr. S. A. Knopf, of New York City. Specimen 3229, a series of type mosquitoes, donated by Dr. C. S. Ludlow. Specimen 3266, the improved water sterilizer of Maj. Carl R. Darnall, Medical Corps, U. S. Army; and 3268, the Ozone water sterilizer apparatus made by Siemens & Halske, Berlin, Germany. Specimens 3239, model of the McCall incinerator, made by J. H. McCall, Huntington, Tenn.; 3242, model of a unit of the Lewis & Kitchen incinerator; 3252, model of the Conley incinerator; 3269, a unit, full size, of the United States Incinerator Company, donated by the company. Specimens 3243 and 3244, old hypodermic syringes, donated by Traux & Co., Chicago, Ill.; 3245, an old hypodermic syringe, donated by Dr. H. C. Yarrow, Washington, D. C.; and a series of old and more recent hypodermic syringes, 3271 to 3302 and 3306 to 3312, purchased. Specimens of old firearms; 3249, wheelock musket; 3250, matchlock musket; 3251, crossbow; 3258, matchlock pistol; 3259, wheelock pistol; 3260, flintlock pistol; 3261, Remington revolver, 1868; all purchased. Also 3247, Springfield musket, model of 1862, and 3248, Springfield smoothbore, 1830; from Springfield Armory.

ARTIFICIAL LIMBS AND APPARATUS.

Under the laws relating to artificial limbs and apparatus, or commutation therefor, orders on manufacturers were given during the fiscal year for 13 artificial legs and 1 foot. Commutation certificates were issued for 154 cases of amputated leg, 108 of amputated arm, 9 of amputated foot, and 1,991 cases of loss of use of limb.

Under the act of June 17, 1870, and subsequent amendments thereto, 23,355 disabled soldiers and sailors have been furnished artificial limbs, or apparatus, or have received commutation in money as follows: Total number benefited to June 30, 1910, 23,746; died, 12,533; dropped from rolls, 592; rejected after one or more payments, 568; remaining on rolls at the end of the fiscal year, 10,053.

Two-thirds of the periodical claims for the benefits under the artificial-limb laws for the three years ending June 30, 1914, become due in the fiscal year 1912. To meet these claims it is estimated that the sum of $330,000 will be required.

APPLIANCES AND TRUSSES.

One hundred and forty-seven appliances were issued during the fiscal year and 516 trusses were furnished and fitted.

MISCELLANEOUS.

WORK OF MEDICAL OFFICERS.

Among the notable activities of medical officers should be noted the appearance of a valuable treatise entitled "Medical service in campaign," by Maj. Paul F. Straub, Medical Corps (General Staff). This work covers a field heretofore unoccupied among works of this character in English, and will prove of great professional service in the instruction of medical officers in the higher grades in the special administrative work which will come to them in time of war.

PELLAGRA.

As the result of a request from Dr. George A. Zeller, superintendent of the Illinois state hospital for the insane, Peoria, Ill., and Dr. James A. Egan, secretary of the state board of health of Illinois, to the Surgeon-General of the Army, Capt. Joseph F. Siler and Capt. Henry J. Nichols, Medical Corps, received orders from the War Department in the latter part of August, 1909, to proceed to Peoria, Ill., for the purpose of studying pellagra which had made its appearance among the inmates of the Peoria state hospital. A study of the disease, continuing for more than a month, was made in conjunction with Dr. W. H. Buhley, of Chicago, with the state health authorities, and with the members of the medical staff of the institution. The following is a summary made by Captains Siler and Nichols:

1. Of 2,150 inmates of the Peoria institution, the majority of whom have been almshouse and asylum inmates for many years, 175 were pellagrous during the summer of 1909. No physicians, attendants, or employees were affected.
2. About 70 per cent of cases had suffered from previous attacks and pellagra has been prevalent at least four years.
3. The average age of cases was 50 years; the sex distribution was about equal.
4. Attacks were mild (skin symptoms, mild digestive tract symptoms without constitutional reaction) and severe (marked skin and digestive tract symptoms with pronounced toxæmia).
5. A diagnosis of pellagra is not warranted in absence of skin symptoms. The symmetry of skin lesions was a most striking feature. When bleb formation occurred the death rate was high.
6. Digestive tract symptoms were not present in all cases. In some cases diarrhea and stomatitis could be attributed to bad teeth and infection with amœbæ and flagellates, but in other cases the constitutional symptoms pointed to some additional specific poison.
7. Patellar and plantar reflexes were abnormal in about three-fourths of the cases, usually increased.
8. It was impossible to determine the exact extent of mental disturbance attributable to pellagra, as all patients were insane before the disease was recognized. The cases developed no suicidal tendencies.
9. Mild cases recovered without therapeutic aid. Severe cases were not much benefited by Fowler's solution, atoxyl or thyroid tablets.
10. Fæces; 84.8 per cent cases showed protozoal infection (amœbæ, flagellate, and encysted forms). These protozoal infections account in part for the intestinal symptoms and are believed to be a predisposing factor.
11. In 18 autopsies, well marked ulcerations of the colon were found in 12 cases, and folliculitis occurred in all. No other organs showed any constant or striking alteration.
12. Cultures of blood, spinal fluid, and of spleen pulp were uniformly negative.
13. The disease impressed us as an intoxication rather than an infection.
14. Not more than 2 ounces of corn was eaten per day; no evidence was obtained of the use of spoiled corn.
15. The possibility of an intoxication from bacterial action on corn products in a damaged intestine is considered the most promising field for study.

OBSERVATIONS IN THE REPUBLIC OF LIBERIA.

Maj. Percy M. Ashburn, Medical Corps, was a member of the commission of the United States of America to the Republic of Liberia in 1909. The following are extracts from his interesting report:

MEDICAL CONDITIONS.

The medical conditions in Liberia are deplorable in the extreme, the amount of preventable or relievable suffering very great, and the mortality undoubtedly much higher than it should be.

This state of affairs is due to several causes, chief among which may be mentioned the total absence, from most parts of the country, of skilled or educated medical men,

with consequent nontreatment or mistreatment of many cases of illness; climatic and sanitary conditions; ignorance of hygiene; and superstition.

My knowledge of the diseases of the country is based on what I have read as to those of neighboring colonies, such as Sierra Leone, French West Africa, and Angola, on conversations with medical men and other citizens, and on the cases that I saw in a free clinic which I ran for about fifteen days, and in which I examined, on the average, about 40 cases a day.

Unfortunately, lack of time and the loss in New York of the large and complete medical equipment that I had planned to take to Liberia prevented my observations of cases from being as thorough as could be desired and almost precluded me from making the collections of harmful or disease-bearing insects and from undertaking the investigations that I had hoped to make.

From the sources cited I learn that the following diseases are more or less prevalent, in addition to many others, some of which are found in temperate climates:

Eye.—Cataract seems unduly common. Practically all varieties of eye diseases seem to occur.

Nose, throat, and ear.—Catarrhal troubles of these parts are common, often resulting in middle ear suppuration with its sequelæ.

Mouth.—The teeth of the people are generally good, but lack of dentists and of proper treatment when disease does start results in much unnecessary suffering.

Respiratory organs.—Pneumonia, pleurisy, bronchitis, and pulmonary tuberculosis all occur with some frequency.

Heart and vessels.—Valvular heart lesions of various kinds were encountered. Several cases of myocarditis of unknown origin and several of old hemiplegia and arteriosclerosis were seen.

Alimentary tract.—Gastric indigestion is very common and is probably due principally to the excessive use of such foods as palm butter and oil, peanuts, and "dumboy," a pasty mass prepared from beaten cassava and swallowed in lumps the size of a walnut or larger. "Biliousness" is complained of by nearly everyone. Dysentery occurs with some frequency. Hemorrhoids and anal fistula seemed unduly common and I saw one very marked case of recto-vesical fistula.

Genito-urinary system.—Venereal disease, especially gonorrhea, is exceedingly common, and, as the trouble is untreated or improperly treated in practically all instances, the sequelæ are numerous and there is a sadly large amount of suffering from stricture and inflammation of the bladder, the prostate gland, the testicles, etc., in the male and from inflammations of the bladder, womb, Fallopian tubes, and ovaries in the female as a result. The importance and dangers of the disease are not realized, in spite of the abundant evidence on all sides, and marital and other innocent infections are therefore unduly common. Chancroids occur, though not so frequently as gonorrhea. I saw but two recognized cases of syphilis. In the male, lymph scrotum and hydrocele are both seen rather frequently.

Virility seems to be preserved to a greater age than in whites. In the female fibroid tumors of the uterus and troubles consequent on lacerations of the pelvic floor or infections during childbirth are common. Miscarriages are very common, being usually due, I think, to uterine infections or malaria. Numerous pregnancies but small surviving families seem, according to my limited observations, the rule.

Infant mortality is high and is largely due, I think, to malaria and improper feeding.

Hernia is exceedingly common. A large proportion of children, probably a majority, have umbilical hernia, but, as relatively few adults have it, it must in most instances undergo spontaneous cure. Inguinal hernias are common among men, and, as neither trusses nor operations are used for their control or cure, they often attain to very large size, produce serious invalidism, and must cause quite a number of deaths.

Skin diseases are common, the most prevalent, after prickly heat, being various forms of ringworm or fungus infections, craw-craw, and certain papular eruptions, and dermal infiltrations that tend to ulcerate and result in scarring and pigmentation.

Leucoderma is often seen, the white patches following in the wake of a form of ringworm.

A certain dry, scaly, diffuse, itchy eruption is common. Elephantiasis is not uncommon, and I saw 8 cases in Monrovia.

Yaws is said to occur, but I saw no cases.

Leg ulcers of various types are extraordinarily common.

Nervous disorders are not infrequently seen. Peripheral neuritis, probably due in most instances to alcohol or malaria, is rather frequently seen, while neuralgias, usually of a supraorbital, an intercostal, or the sciatic nerves, are often met. They are frequently of malarial origin and are relieved by quinine. Some cases are probably rheumatic.

I saw one case of spastic paraplegia.

Muscular rheumatism, especially lumbago, is very common, and is probably somewhat related to the use of too much clothing and the consequent excess of perspiration.

Joint troubles, especially chronic rheumatism and rheumatoid arthritis, were seen rather frequently.

Intestinal parasites are rather common. I had no opportunities to identify species, but had applicants for treatment for pinworms, roundworms, and tapeworms.

Parasites of the skin and connective tissues.—Infection of the skin by larval flies is probably rather common, as I heard of many cases, though I saw none. Chiggers are quite common among the natives.

Itch is not common, and lice do not seem to be so prevalent as would be expected.

Filariasis occurs and is probably very prevalent. In one of the few bloods I examined I found *mf. diurna*.

Guinea worms occur, though I saw no cases.

Malaria is probably the greatest scourge of the country, and it produces many more deaths, much more invalidism, and greater impairment of the efficiency of the people, than does gonorrhea, probably its closest competitor.

It is trite among the Liberians to say that they have fever or "the fever," and they seem to regard it in general as a necessary, if disagreeable, part of life. But even they do not recognize the general prevalence of the disease, as many of its manifestations are regarded as separate and distinct diseases. The badly infected children are regarded as suffering from "the spleen," or as being "just puny;" malarial neuralgias are usually considered pleurisy, heart disease, headache, etc., while severe malarial paroxysms may be spoken of as "an attack of the bile."

In my opinion it is safe to say that quite 90 per cent, and possibly all, of the population of Monrovia have malaria. Both simple tertian and estivo-autumnal forms are seen, and quartan may be present. Two, or possibly three, of our party became infected with malaria, in spite of the care exercised to avoid it.

Sleeping sickness probably occurs in all parts of the Republic, and, considering its uniform fatality, it is dangerously common. I saw 8 cases of what I considered, and what was believed by the sick persons to be, sleeping sickness. Six of these cases came from Arthington, a small farming community up the St. Paul River. Cases are from time to time imported from other parts, but all but one of those that I saw certainly originated in Liberia. I heard of several cases that I did not see.

A fly, commonly called in Liberia the mangrove fly, is much dreaded for its bite. I secured one specimen and am of the present opinion that it is *Glossina-palpalis*, one of the tse-tse flies, and the probable carrier of sleeping sickness in Liberia.

Blackwater fever occurs all along the coast. I saw no cases of it.

Yellow fever, I was told, has not been seen since twelve years ago, when a single case was imported.

Relapsing fever is not recognized, if it occurs.

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Medical practice.—So far as I have been able to learn, there are at present but two graduated physicians in Liberia, one at Monrovia and one at Lower Buchanan. Both are native Africans, graduated from Meharry Medical College, in Tennessee. Doctor Green, an American negro, graduated from the University of Pennsylvania, left Monrovia during our stay there. Because of lack of opportunity, lack of money, or for other reasons, the great mass of Liberian people are without competent medical attention throughout their lives, with the result that they suffer unduly and die prematurely in great numbers, or survive to endure invalidism from troubles that are preventable or curable. Surgery is apparently unknown, except for minor injuries, and tumors, hydroceles, hernias, inflammatory foci, etc., become crippling or fatal troubles.

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Ideas as to cause of disease.—Very few of the Liberians have ever heard that mosquitos transmit malaria, that tse-tse flies may carry sleeping sickness, and the most of the other accepted facts of modern medicine; and of the few who have heard them, many, if not the majority, disbelieve the facts. I was informed from various and credible sources that not 1 person in 10 is believed to die a natural death, the fatal disease in the other 90 per cent being ascribed to poisoning, witchcraft, evil spells, etc. A district commissioner informed me that he had been poisoned by having a powder sprinkled on his legs while he slept, and that ever since, for a period of many years, he had had a live and moving animal in his stomach, although a native woman had by treatment removed from his legs a number of snakes, toads, worms, and hairballs, and thereby cured those members.

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Dyspepsia is widespread, but instead of being attributed to the diet of palm oil and masses of dumboy, it is very often thought to be due to the presence in the stomach of a

snake or toad, and in proof of the belief the sufferers will state that they can see or feel the animal move, that they have vomited its eggs or seed, or possibly its young, or that they know the person who poisoned them and caused the trouble.

Many of the more enlightened persons who reject such beliefs have fixed ideas of their own as to the causes of disease, such as that malaria is due to minerals in the drinking water, blackwater fever to the use of whisky, sleeping sickness to the use of a certain variety of cassava.

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Sanitary conditions.—The civilized Liberians are housed much like the blacks in the United States. The houses are built as they or their ancestry learned to build them here and are built of brick or frame. Even the best lack plumbing and running water. The natives live in round or square houses made of wattles plastered with mud from the termite hills, the termites giving it a smoothness and cohesiveness it did not otherwise have. These houses or huts have dirt floors and palm-thatched roofs. A fire is kept going inside much of the time and the cooking is done there. Most of the houses have but one opening, a wooden door, which is kept closed at night. This and the fire and smoke within probably keep the mosquitoes and other insects reduced in numbers. The natives dress suitably for the climate, as a rule, the dress varying from a loin cloth to a long coat or skirt of country cloth, a heavy, durable, cotton fabric of their own make.

The Americo-Liberians in general dress much too heavily. In a very moist and hot climate they attempt to and do, as nearly as possible, dress as they would in New York or London. Long broadcloth coats, trousers, and waistcoats, stiff white shirts, patent-leather shoes, and silk hats constitute the outer attire of the dressed-up man. In addition to these he usually wears, if he can afford it, woolen underclothing and, in rainy weather, a rain coat. The women dress quite as warmly as the men, and flannel underclothing, corsets, numerous skirts, and waists keep them in a semimacerated state much of the time. The light and attractive summer wear used by men and women in America is very little used in Liberia. I think it probable that a part of the poor health and inefficiency of Liberians is due to excess of clothing.

The drinking-water supply of Liberia is derived principally from wells and running streams and it is probably often bad. Rain water, though abundant, is little used for drinking. It is easier and cheaper to dig a well than to build a cistern.

There is no sewerage system anywhere in Liberia. Privies are in use in all the towns and settlements of Liberians. The natives defecate on the surface of the ground. Either the civilized or native system subjects the water of near-by wells to suspicion.

The policing of both houses and towns is surprisingly good. Both are usually very clean, and the absence of trash, refuse, and bad odors gives one a pleasing surprise. This is true of both civilized and native settlements. It is probable that a part of the cleanliness of the civilized towns was due to special efforts made for the reception of the commission, but this remark could hardly apply to the native towns that we saw. Probably partly because of this cleanliness flies, mosquitoes, rats, and other vermin were very little in evidence about the towns and houses.

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CLERICAL SERVICE.

Before concluding my second annual report I desire to say a few words with reference to the efficiency of the clerical force of my office. Their work is kept uniformly in hand and up to date, and the manner in which it is done speaks well for the competency of the personnel employed upon it. Much of it is complicated and intricate, and demands for its successful performance capacity of high order. I am glad to state that all such demands during the past year have been fully honored. In that connection the inadequacy of the compensation provided by law for the clerical civil service of the Government may pertinently be noticed. The grades of salaries now current were established more than half a century ago, when the cost of living was appreciably less. The enhanced prices at which practically all the daily necessaries of life are sold at the present time, as compared with the prices current immediately preceding the civil war, diminish the purchasing equivalent of the salaries then established, and thus

accomplish by indirection a reduction in their real value. This reduction has been accompanied by a material increase in the hours of labor exacted of the employees, as well as by material restrictions in the leaves of absence formerly allowed them; and although no suggestion is intended that the hours are excessive, or that the leaves are not sufficiently liberal, nevertheless the increase in hours and the restrictions on leaves, imposed during a period when the purchasing value of the salaries has been progressively depreciating, are factors that deserve consideration in discussing the question of compensation. It should be borne in mind also that while the civil servant of the Government has thus been required to render increasing service for a diminishing wage, his fellow-laborer in private life has fared quite differently. Where compensation is fixed by agreement and not by law it is of course more readily adjusted to the state of the times; and accordingly, as is a matter of common knowledge, although the hours of labor required of persons in private employment have been much diminished and the conditions of their employment greatly ameliorated during the last half century, their wages have nevertheless shown a constant advance. This is conspicuously true of those branches of labor which enjoy the right to organize, a right no doubt properly denied to public servants in their capacity as such. The Government should not, however, because its employees are forbidden to organize, become a laggard in readjusting wages to the cost of living. The example set by private employers in this respect deserves emulation moreover, not merely as a matter of justice to the many obscure but faithful employees of the Government whose aptitude, intelligence, and diligence are enlisted in the execution of its multifarious functions, but in the public interests as well; for it is becoming increasingly difficult to obtain capable recruits for the lower branches of the civil service on account of the greater attractions and opportunities offered by private employment. Young men of advanced education and trained clerical accomplishments are particularly reluctant to take up the civil service as a career. The entrance wage of $75 a month or less, with a probable maximum of $1,800 per annum after years of fruitful and efficient work, is not sufficient to tempt the ambitious and energetic from fields of activity where the initial inducement is greater and the rewards of success are almost illimitable. We find therefore that men having the qualifications of mind and training which make them valuable in any field, and which are as essential in government work as in private business, turn more and more to the latter, and the government service threatens to become largely the refuge of women and of men who lack the training, the energy, and the ambition for private success. I mean no disparagement of the efficiency of our women clerks in those classes of work to which they may be suitably assigned. On the contrary, they are generally willing and diligent workers, and measure up to all the requirements of subordinate clerical duty. But, I must add, they are not as universally as men amenable to the calls of discipline, and as a rule do not exhibit that larger zeal and interest in wider official horizons which would fit them for higher usefulness, even if there were no other reasons why executive responsibility should be spared them. In this office, apart from the chief clerk, the law clerk, and the technical assistants, women comprise 23 per cent of the clerical force. Considering that the business of this office is largely scientific and pro-

fessional, and that vacancies in the higher executive positions must be filled from among the men clerks, this is a larger proportion than is desirable. Without any disposition whatever to displace or remove any of the women clerks now employed, it is my desire on account of the foregoing to have only men clerks appointed hereafter until such time as a better proportion shall be established. And the men clerks should possess the qualifications above referred to which will lead them in the fullness of time to become available for the higher responsibilities of executive position. Neither incapables nor strangers can be expected to step into vacant positions of this character and fill them acceptably. Such positions require not only intelligence, industry, and general training, but also an accurate comprehension of the principles of administration, and in each branch of the service an intimate acquaintance with its details. Every branch of the service should therefore always have at command a body of trained men from whom promotions to such positions can be made. To accomplish this its lower grades must be occupied by men fitted by qualifications to go higher up, and such men can seldom now be secured or retained in the lower grades, at the present rates of pay, against the superior charms of a private career. The Congress has heretofore, in recognition of the great changes in the conditions and cost of living, and of the growing competition of private enterprise for talents which the Government itself needs, felt the justice and necessity of providing larger compensation for certain classes of officials and employees. It has granted an increase of 50 per cent in the pay of its own members, and a considerable increase in the compensation of many of its own immediate officers. It has increased substantially the compensation of nearly if not quite all the members of the judiciary. In the executive branch it has increased the compensation of the President and of the members of his Cabinet 50 per cent and given gratifying and large increases to most of their assistants; it has given substantial increases to the rank and file of the military and naval establishments; it has, as I understand, made generous increases also in the pay of many classes of employees serving in the country at large; and it has made satisfactory additions here and there to the salaries of some of the employees in Washington. But for the most part the salaries of the lower grades of government employment in this city remain on the level where they were placed before the civil war. The Keep Commission, after a thorough and exhaustive investigation into this whole matter a few years ago, found a very real necessity for the readjustment of salaries in Washington and recommended an entirely practicable remedy in the premises. The adoption of some such scheme is, it appears to me, a matter of the gravest importance toward the continuance of an efficient personnel. Some discussion of the cognate question of the superannuation of civil employees may also be deemed pertinent. This office has perhaps been fortunate in having suffered little burden from its elderly and aged employees. The majority of the clerks of advanced years came into this office in the full tide of youth shortly after the close of the civil war, nearly all of them either directly or indirectly from the army. Their military experience and familiarity with army customs, methods, and principles have lent the greatest value to their work. They have grown old in the service; and age has in some instances dimmed the keenness of their faculties or

diminished the vigor of their industry. Most of them are of the highest usefulness, and by reason of their natural gifts, experience, and continued efficiency are kept in the positions of greatest trust and responsibility. Their absence record compares favorably with that of their younger colleagues, while their capacity as a rule remains unimpaired. In some cases it has been found necessary in their own interest as well as in that of the service to assign them to less onerous tasks with which their failing powers were better able to cope; and this has been accompanied by an appropriate reduction of grade and pay, a procedure which is distressing alike to those who must cause such reductions and to those who suffer by them. But these veterans, even at the reduced pay, still were able to earn a livelihood. I am bound to admit, however, that one or two instances have come to my notice where men enfeebled by disease and the infirmities of age have after long service been unable to continue the performance of duty of any character, and under the law have, after a brief indulgence of leave, found themselves dropped from the rolls. Few men in the lower grades of public service in Washington, having due regard to the great cost of the comforts of life, of the decent maintenance of their families, and of the education of their children, are able to make adequate provision for an unproductive old age. When therefore such disability comes to these old men, as it will to some, it appears a harsh reward for a lifetime's service to throw them out upon the cold sympathies of the world. Suitable provision for their last years is a fair call of humanity. At the same time it would serve a valuable public purpose as well, for it would attract to and retain in the service of the Government a class of employees of exceptional capacity, who, without such inducement, now turn to a private career, because of the greater opportunities there found for the accumulation of a reasonable competency for their old age.

FINANCIAL STATEMENT, 1910.[a]

Medical and hospital department, 1910.

Appropriated by act approved March 3, 1909		$700,000.00
Transfer to this head made by the Treasury Department to correct a disbursing error, from "Medical and hospital department, 1909"	$79.50	
Other refundments during the year	10.09	
		89.59
Total to be accounted for		700,089.59
Disbursed during the year:		
Expenses of medical supply depots	$782.93	
Medical and hospital supplies	386,287.86	
Medical attendance and medicines (except at recruiting stations)	9,270.17	
Medical expenses of recruiting (including medical attendance and medicines at recruiting stations)	6,205.70	
Pay of nurses	606.93	
Pay of other employees	143,047.52	
Hospital laundry	35,890.40	
Expressage	312.81	
Notary fees	35.52	
Gas and electricity for medical apparatus	114.62	
Miscellaneous	4.60	
		582,559.06

[a] The "disbursements" in this statement include settlements with public creditors made by the accounting officers of the Treasury and charged by them to these appropriations.

Transfer by the Treasury Department to "Medical and hospital department, 1909," to correct a disbursing error		$22.33
Balances on hand June 30, 1910:		
In United States Treasury	$35,885.08	
In transit from disbursing officers to Treasury	2,001.69	
In transit from Treasury to disbursing officers	66,500.00	
In hands of disbursing officers—		
New York City	54.78	
Washington, D. C	5,820.86	
St. Louis	2,464.88	
San Francisco	1,089.97	
Honolulu, Hawaii	118.74	
Manila, P. I	3,572.20	
		117,508.20
Total accounted for		700,089.59

Medical and hospital department, 1909.

Balance on hand July 1, 1909, act May 11, 1908		$151,573.16
Transfers made by the Treasury Department from other appropriations to this head to correct disbursing errors	$119.00	
Other refundments during the year	8.00	
		127.00
Total to be accounted for		151,700.16
Disbursed during the year:		
Expenses of medical supply depots	$185.96	
Medical and hospital supplies	131,026.70	
Medical attendance and medicines (except at recruiting stations)	4,305.90	
Medical expenses of recruiting (including medical attendance and medicines at recruiting stations)	1,023.66	
Pay of nurses	50.00	
Pay of other employees	2,049.45	
Hospital laundry	4,534.42	
Expressage	10.00	
Notary fees	1.32	
Gas and electricity for medical apparatus	50.93	
		143,238.34
Transfer by the Treasury Department to "Medical and hospital department, 1910," to correct a disbursing error		79.50
Balance on hand June 30, 1910, in United States Treasury		8,382.32
Total accounted for		151,700.16

Medical and hospital department, 1908.

Balance on hand July 1, 1909, act March 2, 1907		$627.63
Disbursed during the year:		
Medical and hospital supplies	$3.03	
Medical attendance (not at recruiting stations)	65.65	
		68.68
Transfer by the Treasury Department to "Medical and hospital department, 1909," to correct a disbursing error		6.67
Carried to surplus fund		552.28
Total accounted for		627.63

Replacing medical supplies, 1910–11 (act June 12, 1906, 34 Stats., 256).

Amounts accruing to this fund:		
A. On account of supplies transferred to—		
Engineer Department, U. S. Army	$280.00	
Quartermaster's Department, U. S. Army	6.24	
Board of Road Commissioners, Alaska	31.67	
Isthmian Canal Commission	18,418.26	
Navy and Marine Corps	1,442.31	
Forest Service	177.50	
States, for the use of the militia	31,109.07	
		$51,465.05
B. On account of supplies sold to—		
States, for the use of the militia	309.50	
Civil government, Philippine Islands	476.01	
Civilian employees and civilians	2,634.84	
		3,420.35
C. On account of collections from carriers and others for medical property lost or destroyed		525.23
Total to be accounted for		55,410.63
Transfer by Treasury Department to "Replacing medical supplies, 1909–10," to correct erroneous deposit		1.42
Balance on hand in United States Treasury June 30, 1910		55,409.21
Total accounted for		55,410.63

Replacing medical supplies, 1909–10.

Balance on hand July 1, 1909		$41,869.55
Amounts accruing to this fund:		
A. On account of supplies transferred to—		
Engineer Department, U. S. Army	$893.08	
Quartermaster's Department, U. S. Army	5.40	
Isthmian Canal Commission	28.48	
Navy	164.44	
States, for the use of the militia	3,704.45	
		4,795.85
B. On account of supplies sold to—		
States, for the use of the militia	8.26	
Civil government, Philippine Islands	38.96	
Civilian employees and civilians	429.50	
		476.72
C. On account of collections from carriers and others for medical property lost or destroyed		58.18
Transfer by the Treasury Department from "Replacing medical supplies, 1910–11," to correct erroneous deposit		1.42
Total to be accounted for		47,201.72
Disbursed during the year		21,561.69
Balances on hand June 30, 1910:		
In United States Treasury	$3.20	
In hands of disbursing officer, New York City	25,636.83	
		25,640.03
Total accounted for		47,201.72

Replacing medical supplies, 1908–9.

Balance on hand July 1, 1909		$3,883.00
Amounts accruing to this fund:		
On account of collections from carriers for property lost or destroyed	$1.69	
On account of collection from contractor, damages for nonperformance of contract	68.00	
		69.69
Total to be accounted for		3,952.69
Disbursed during the year		3,951.00
Balance in United States Treasury June 30, 1910		1.69
Total accounted for		3,952.69

Replacing medical supplies, 1907–8.

Balance on hand July 1, 1909	$33.11
Carried to surplus fund	33.11

Replacing medical supplies destroyed by fire, 1910–11.

Appropriated by act approved June 25, 1910	$367,000.00
Balance in United States Treasury June 30, 1910	367,000.00

Replacing medical supplies destroyed by fire, 1909–10.

Balance on hand July 1, 1909, act March 4, 1909	$50,000.00
Disbursed during the year	37,183.57
Balance in hands of disbursing officer, New York City, June 30, 1910	12,816.43

Field medical equipment.

Balance on hand July 1, 1909, act May 11, 1908	$84.00
Disbursed during the year	84.00

Library, Surgeon-General's Office, 1910.

Appropriated by act approved March 3, 1909		$10,000.00
Disbursed during the year		7,103.04
Balances on hand June 30, 1910:		
In United States Treasury	$448.37	
In hands of disbursing officer, Washington, D. C.	2,448.59	
		2,896.96

Library, Surgeon-General's Office, 1909.

Balance on hand July 1, 1909, act May 11, 1908	$4,082.85
Refundment during the year, to correct disbursing error	.01
Total to be accounted for	4,082.86
Disbursed during the year	3,921.97
Balance in United States Treasury June 30, 1910	160.89

Library, Surgeon-General's Office, 1908.

Balance on hand July 1, 1909, act March 2, 1907	$524.21
Carried to surplus fund	524.21

Army Medical Museum, 1910.

Appropriated by act approved March 3, 1909		$5,000.00
Disbursed during the year		3,420.22
Balances on hand June 30, 1910:		
In United States Treasury	$203.95	
In hands of disbursing officer, Washington, D. C.	1,375.83	
		1,579.78

Army Medical Museum, 1909.

Balance on hand July 1, 1909, act May 11, 1908	$1,846.90
Disbursed during the year	1,664.38
Transferred by Treasury Department to "Medical and hospital department, 1909," to correct a disbursing error	90.00
Balance in United States Treasury June 30, 1910	92.52
Total accounted for	1,846.90

Army Medical Museum, 1908.

Balance on hand July 1, 1909, act March 2, 1907	$407.38
Carried to surplus fund	407.38

Artificial limbs, 1910.

Appropriated by act approved March 4, 1909		$132,000.00
Disbursed during the year		116,629.65
Balance on hand June 30, 1910:		
In United States Treasury	$11,828.35	
In hands of disbursing officer, Washington, D. C.	3,542.00	
		15,370.35

Artificial limbs, 1909.

Balance on hand July 1, 1909, act May 27, 1908	$50,986.65
Disbursed during the year	4,689.14
Balance, June 30, 1910, in United States Treasury	46,297.51

Artificial limbs, 1908.

Balance on hand July 1, 1909, act March 4, 1907	$19,783.56
Disbursed during the year	89.09
Carried to surplus fund	19,694.47

Appliances for disabled soldiers, 1910.

Appropriated by act approved March 4, 1909		$2,000.00
Disbursed during the year		1,101.88
Balances on hand June 30, 1910:		
In United States Treasury	$700.00	
In hands of disbursing officer, Washington, D. C.	198.12	
		898.12

Appliances for disabled soldiers, 1909.

Balance on hand July 1, 1909, act May 27, 1908	$646.70
Disbursed during the year	117.76
Balance in United States Treasury June 30, 1910	528.94

Appliances for disabled soldiers, 1908.

Balance on hand July 1, 1909, act March 4, 1907	$686.99
Carried to surplus fund	686.99

Trusses for disabled soldiers, 1910.

Appropriated by act approved March 4, 1909		$6,000.00
Disbursed during the year		3,400.68
Balances on hand June 30, 1910:		
In United States Treasury	$2,200.00	
In hands of disbursing officer, Washington, D. C.	399.32	
		2,599.32

Furnishing trusses to disabled soldiers, indefinite appropriation (secs. 1176, 1177, and 1178, R. S., and act of March 3, 1879).

Balance on hand July 1, 1909	$350.23
Drawn during the year	30.61
Total to be accounted for	380.84
Disbursed during the year (on account of obligations incurred prior to July 1, 1909)	380.84

General summary of all appropriations.

Balances on hand July 1, 1909	$327,385.92
Appropriated	1,222,030.61
Proceeds of sales, etc., accruing to replacing funds, act June 12, 1906 (34 Stats., 256)	60,811.07
Refundments during the year	18.10
Total to be accounted for	1,610,245.70
Disbursed during the year	931,164.99
Carried to surplus fund	21,898.44
Balances on hand June 30, 1910	657,182.27
Total accounted for	1,610,245.70

VITAL STATISTICS.

The following tables show in detail most of the statistical data upon which the statements in this report are based:

58. Surgical operations performed on American troops.

59. Numerical view of the effect of disease and injury on United States troops serving at home and abroad in the year 1909, compared with corresponding data for the year 1908, by races.

60. Admissions to sick report, discharges, and deaths in the army, with ratios per 1,000 of mean strength, in which all available data for the period 1899–1908 are placed in comparison with the year 1909.

61. Admissions to sick report, discharges, deaths, and noneffectiveness, with ratios per 1,000 of mean strength, year 1909, for officers and total enlisted of the army.

62. Admissions to sick report, discharges, deaths, and noneffectiveness, with ratios per 1,000 of mean strength, for American troops, of the army, white, colored, and total, for the year 1909.

63. Admissions to sick report, discharges, deaths, and noneffectiveness, with ratios per 1,000 of mean strength, for the year 1909, United

States continental, excluding Alaska, and separately for white and colored troops serving therein.

64. Admissions to sick report, discharges, deaths, and noneffectiveness, with ratios per 1,000 of mean strength, for the year 1909, Alaska, Cuba, and Hawaii.

65. Admissions to sick report, discharges, deaths, and noneffectiveness, with ratios per 1,000 of mean strength, for the year 1909, American troops, white, colored, and total, serving in the Philippine Islands.

66. Admissions to sick report, discharges, deaths, and noneffectiveness, with ratios per 1,000 of mean strength, year 1909, for American troops on transports and for native Porto Rican and Filipino troops.

67. Total movement of sick for the United States Army at home compared with that of foreign armies.

68. A comparison of the admission and death rates of the United States Army at home for certain special diseases with those of foreign armies.

69. A comparison of the most important diseases by departments, United States.

70. Movement of sick American troops of the army by years, 1905–1909.

71. Influence of disease in the army by length of service, age, and arms of service, year 1909.

Very respectfully,

GEO. H. TORNEY,
Surgeon-General, U. S. Army.

The SECRETARY OF WAR.

APPENDED PAPERS—STATISTICAL TABLES.

TABLE No. 58.—*Surgical operations performed by officers of the Medical Corps, on officers and enlisted men of the army, during the calendar year 1909.*

Operation.	Disease or injury.	Cases.	Result.				Anesthetic.				
			Successful.	Partially successful.	Failure.	Died.	Chloroform.	Ether.	Chloroform and ether.	Local.	None.
	Eye.										
Enucleation of eye	Gunshot wound of eye	1	1				1				
Do	Rupture of eyeball	1	1					1			
Do	Panophthalmitis, gonorrheal	2	2				1	1			
Do 1 Iridectomy 1	Glaucoma	2	2					2			
Do	Opacity of cornea	1	1							1	
Do 3 Suturing of cornea and sclera 1	Laceration of eyeball	4	4							4	
External canthotomy	Ophthalmia, gonorrheal	1	1					1			
Extraction	Cataract	1	1							1	
Desmarres' transplantation 4 Excision and suture 2 Fuch's operation 1 Arlt's operation 1 Excision 12	Pterygium	20	20					1		19	
Tenotomy of external rectus 3 Shortening of internal rectus 1	External strabismus	4	4				1			3	
Tenotomy of superior rectus	Hypertropia	1	1							1	
Dilatation of ducts	Dacryo-cystitis	1		1				1			
Expression	Trachoma	8	8					5		3	
Do	Chronic follicular conjunctivitis.	4	4							4	
Pagenstecher's operation	Ptosis	1	1							1	
Division of scar tissue	Ectropion lower lid	1	1							1	
Incision and curettage	Chalazion	11	11					1		10	
Excision	Ocular cyst	3	3							2	1
Do	Cyst of lid	1	1							1	
Do	Papillomatous growth of lid	2	2							2	
Extraction	Foreign body imbedded in cornea.	10	10					1		9	
	Ear.										
Schwartz operation 1 Mastoidotomy and curettage 3 Mastoidotomy 11	Mastoiditis	15	14	1			5	9		1	
Incision of tympanum 17 Incision over mastoid 1 Mastoidotomy 1 Paracentesis 2	Otitis media	21	21					1		18	2
Incision and drainage	Abscess, external ear	6	6							6	
Excision	Polypus, external meatus	3	3							2	1
Do	Supernumerary cartilage right ear, hereditary.	1	1					1			
Suturing and drainage	Ear partially torn from head	1	1							1	
	Nose.										
Submucous resection	Deflection of septum	4	4							4	
Do 15 Ash's operation 1	Deviation of septum	16	16							16	
Turbinectomy 29 Cauterization 7	Hypertrophy of turbinates	36	36							36	
Do	Chronic spheno-ethmoiditis	1	1							1	
Incision and drainage	Abscess of nasal fossa	1	1							1	
Excision and cauterization, 4; excision by cold snare, 7.	Polypus	11	11							11	
Excision	Septal spur	13	13							13	
Excision by curet and forceps	Adenoids, naso-pharyngeal	116	116					7		109	
	Mouth and pharynx.										
Removal of both bicuspids, and excision.	Epulis, right superior maxilla.	1	1							1	
Incision and drainage	Ludwig's angina	1	1				1				

TABLE No. 58.—*Surgical operations performed by officers of the Medical Corps, on officers and enlisted men of the army, during the calendar year 1909*—Continued.

Operation.	Disease or injury.	Cases.	Result.				Anesthetic.				
			Successful.	Partially successful.	Failure.	Died.	Chloroform.	Ether.	Chloroform and ether.	Local.	None.
	Mouth and pharynx—Cont'd.										
Excision	Old scar on tongue	1	1	...	...	...	....	....	....	1	...
Do	Epithelioma of palate	1	1	...	...	...	....	....	....	1	...
Do	Papillomata, soft palate	11	11	...	...	...	....	....	....	11	...
Do	Uvulaptosis	5	5	...	...	...	....	....	....	5	...
Tonsillectomy	Tuberculosis of tonsil	1	1	...	...	...	....	....	....	1	...
Do 78 Excision by dissection 126	Hypertrophy of tonsil	204	204	...	...	...	....	5	....	180	19
Tonsillectomy 93 Excision by dissection 6	Tonsillitis	99	99	...	...	...	....	28	2	48	21
Excision	Adenoids	10	10	...	...	...	....	5	....	4	1
	Neck and thorax.										
Suturing in three layers	Incised wound of neck, opening into pharynx.	1	1	...	...	...	....	....	....	....	1
Suturing	Incised wound of neck, involving epiglottis and pharynx, suicidal.	1	1	...	...	...	....	....	....	....	1
Tracheotomy	Edema of glottis	1	....	....	....	1	....	....	....	....	1
Do	Diphtheria, laryngeal	1	....	....	....	1	....	....	....	....	1
Thyroidectomy, right lobe and isthmus.	Goiter	1	1	...	...	...	....	1	....	....	...
Thyroidectomy, partial left lobe.	Goiter recurrent	1	1	...	...	...	....	1	....	....	...
Thoracotomy and rib resection.	Abscess of lung	1	1	...	...	...	....	1	....	....	...
Do 10 Thoracotomy 6	Empyema	16	12	1	...	3	4	7	....	5	...
Paracentesis 2 Aspiration 18	Pleurisy with effusion	20	20	...	...	...	....	....	....	13	7
Incision	Suspected pleuritic effusion.	1	....	....	1	...	....	....	....	1	...
	Abdomen.										
Suturing of wound	Incised wound of abdomen, opening peritoneum.	1	1	...	...	...	1	....	....	....	...
Repair by suturing	Laceration of jejunum	1	....	....	....	1	....	....	1	....	...
Exploratory laparotomy and drainage.	Penetrating wound of abdomen and thorax.	1	....	....	....	1	....	1	....	....	...
Exploration of peritoneum	Gunshot wound of abdomen.	1	....	....	....	1	....	1	....	....	...
Exploratory operation on abdominal wall.	.....do	1	1	...	...	...	....	1	....	....	...
Laparotomy and liberation	Adhesions, multiple, of intestines.	1	1	...	...	...	....	1	....	....	...
Laparotomy	Intestinal obstruction	1	1	...	...	...	....	1	....	....	...
Laparotomy and drainage 2 Exploratory laparotomy 1	Peritonitis	3	2	...	...	1	....	2	1	....	...
Laparotomy, and irrigation of abdominal cavity with salt solution.	Tubercular peritonitis	1	....	...	1	...	....	1	....	....	...
Exploratory laparotomy, median incision above umbilicus, closure of perforation by suture, counter opening in right iliac region with drainage in right kidney pouch and pelvis.	Perforating ulcer of stomach followed by peritonitis.	1	1	...	...	...	....	....	1	....	...
Laparotomy, repair, and drainage.	Perforating ulcer of intestine during course of typhoid fever.	1	1	...	...	...	1	....	....	....	...
Laparotomy and packing to control hemorrhage.	Rupture of liver	1	....	....	....	1	....	1	....	....	...
Manson's operation 1 Rib resection, axilliary line 2 Thoracic route, 9th intercostal space 2 Evacuation and packing 1 Incision and drainage 13 Puncture and drainage 1 Exploratory incision 2	Abscess of liver	22	13	3	1	5	5	17	....	....	...

TABLE No. 58.—*Surgical operations performed by officers of the Medical Corps, on officers and enlisted men of the army, during the calendar year 1909*—Continued.

Operation.	Disease or injury.	Cases.	Result.				Anesthetic.				
			Successful.	Partially successful.	Failure.	Died.	Chloroform.	Ether.	Chloroform and ether.	Local.	None.
	***Abdomen*—Continued.**										
Cholecystotomy..... 5 Cholecystotomy and separation of adhesions.... 2 Exploratory cholecystotomy..... 2	Cholecystitis.....	9	8	...	...	1	1	8	...	...	...
Appendectomy and drainage of gall bladder.	Cholecystitis gangrenous, and appendicitis from extension of inflammation from gall bladder.	1	1	...	...	...	1	...	...	...	...
Exploratory abdominal section.	Suspected cholecystitis.....	1	1	...	...	...	...	1	...	...	...
Cholecystostomy.....	Gallstones	1	1	...	...	...	1	...	...	...	...
Cholecystotomy, evacuation of pus and gallstones, and drainage.	Cholelithiasis with empyema of gall bladder.	1	1	...	...	...	...	1	...	...	...
Exploratory laparotomy....	Suspected gallstones	1	1	...	...	...	...	1	...	...	...
Do.....	Hydrops of gall bladder.....	1	1	...	...	...	...	1	...	...	...
Tapping.....	Cirrhosis of liver.....	1	1	...	...	...	...	...	...	...	1
Appendectomy, Dawborn's method..... 1 Appendectomy, McBurney's gridiron incision.. 2 Appendectomy, right rectus incision..... 8 Appendectomy, muscle-splitting operation..... 2 Appendectomy, no technique stated.....159 Excision of old laparotomy scar and drainage.. 1 Incision and drainage.... 1	Appendicitis.....	174	170	...	...	4	21	147	6	...	...
Do.....	Appendiceal abscess.....	2	2	...	...	...	...	2	...	...	...
Do.....	Abscess, following operation for appendicitis.	1	1	...	...	...	...	1	...	...	...
Excision.....	Fistula at site of an appendectomy.	1	1	...	...	...	1	...	...	...	...
Resection of sinus	Sinus, following an appendectomy.	1	1	...	...	...	...	1	...	...	...
Appendicostomy..... 5 Appendicostomy, gridiron incision..... 1	Chronic amebic dysentery...	6	4	2	...	...	1	5	...	...	...
Bassini's operation..... 97 Bassini's modified operation..... 32 Bassini's and McMacerven's operation..... 1 Ferguson's operation.... 11 Ferguson's modified operation..... 12 Andrews's modification of Ferguson's operation.. 1 Halstead's operation..... 3 Johns Hopkins's operation..... 1 Johns Hopkins's modified operation..... 1 Stacke's operation..... 1 Suturing of conjoined tendon and Poupart's ligament with interrupted suture..... 1 Suturing of internal ring. 1 Injection of tincture of iodine into inguinal canal and pressure applied to same..... 1 Operation not stated..... 8	Inguinal hernia.....	171	164	5	1	[a]1	25	132	12	2	...

[a] Died of abscess of lung.

TABLE No. 58.—*Surgical operations performed by officers of the Medical Corps, on officers and enlisted men of the army, during the calendar year 1909*—Continued.

Operation.	Disease or injury.	Cases.	Result.				Anesthetic.				
			Successful.	Partially successful.	Failure.	Died.	Chloroform.	Ether.	Chloroform and ether.	Local.	None.
	Abdomen—Continued.										
Bassini's operation 2 Ferguson's operation 1	Inguinal hernia, recurrent	3	3				1	2			
Bassini's operation 1 Mayo's operation 1 Excision of sac, closure with layer suture 1 Operation not stated 1	Ventral hernia	4	4				1	3			
Excision of scar and suturing of abdominal walls 1 Excision of scar, breaking up of adhesions, and closing each layer separately with double flap fascia 1	Ventral hernia, following a laparotomy.	2	2					2			
Greig Smith's modified operation.	Umbilical hernia	1	1					1			
Bassini's operation	Femoral hernia	3	3					2	1		
Sigmoidectomy	Adenoma	1	1					1			
Incision and drainage	Abscess, postcecal	1	1					1			
Evacuation	Abscess, abdominal	1	1					1			
Laparotomy	For diagnostic purposes, no disease stated.	2	2					2			
	Anus and rectum.										
Dilatation and cauterization 1 Dilatation and curettage 1	Ulcer of rectum	2	2				1	1			
Incision and curettage	Fistula of rectum, chronic	2	2				2				
Cauterization	Prolapse of rectum	1	1					1			
Excision	Polypus of rectum	1	1							1	
Incision and drainage	Abscess of rectum	2	2					1			1
Do 45 Incision and curettage 12 Do	Ischio-rectal abscess	57	57				7	16	2	25	7
Incision and drainage	Ischio-rectal sinus	3	2	1				1		2	
Do 9 Incision and curettage 1	Peri-rectal abscess	1	1							1	
Divulsion of sphincter and curettage of ulcer.	Fissure of anus, with ulcer of rectum.	10	10					8		2	
Dilatation of stricture, and excision and curettage of fistula.	Stricture of rectum and fistula in ano.	1	1				1				
Fistulous tract laid open by incision through sphincter, and curettage 26 Multiple incisions and curettage 2 Curettage and packing 2 Excision 5	Fistula in ano	1	1				1				
Curettage	Ulcer of anus	35	34	1			4	23	1	5	2
Dilatation 1 Dilatation and curettage 2	Fissure of anus	3	3					2		1	
Excision	Polypus of anus	1	1							1	
Cauterization 2 Excision 68 Excision and cauterization 6 Incision and evacuation of clot 26 Clamp and cautery 61 Clamp cautery and ligature 7 Excision and suture 22 Ligation 24 Ligation and excision 46 Incision and curettage 1 Allingham's operation 10 Mitchell's operation 4 Pilcher's operation 6 Whitehead's operation 5	Hemorrhoids	288	288				40	144	19	76	9

TABLE No. 58.—*Surgical operations performed by officers of the Medical Corps, on officers and enlisted men of the army, during the calendar year 1909*—Continued.

Operation.	Disease or injury.	Cases.	Result.				Anesthetic.				
			Successful.	Partially successful.	Failure.	Died.	Chloroform.	Ether.	Chloroform and ether.	Local.	None.
	Genito-urinary system.										
Orchidectomy	Hypertrophy and fibroid degeneration of testicle.	1	1				1				
	Tuberculosis of testicle	2	2				1	1			
	Suspected tuberculosis of testicle.	1	1				1				
	Orchitis, acute	3	3					3			
	Undescended testicle	2	2							2	
	Gumma, gangrenous of testicle.	1	1					1			
Supra-pubic excision	83										
Scrotal excision	3										
Excision, site not stated	33										
Ablation of scrotum	1										
Bennett's operation	3	Varicocele	128	128			21	90	1	15	1
Von Bergmann's operation	3										
Radical operation	1										
Ligation	1										
Excision of tunic	14										
Inversion and partial excision	8										
Incision and drainage	7										
Andrews's operation	5										
Volkman's operation	2										
Bottle operation	1	Hydrocele	47	46		1	3	29		12	3
Modified bottle operation	2										
Jaboulay's operation	1										
Open operation	1										
Eversion of tunic	1										
Incision and packing	1										
Tapping	4										
Extirpation		Tumor of testicle	2	2			1			1	
Excision of suppurating area		Abscess of testicle	1	1				1			
Excision of mass		Lymphangitis, filarial, inguinal portion of spermatic cord.	1	1				1			
Incision and drainage	5										
Epididymectomy	8	Epididymitis	19	19			1	15	1	2	
Hagner's operation	5										
Belfield's basotomy	1										
Epididymectomy		Hypertrophy of epididymis	3	3				3			
Incision and drainage		Abscess of epididymis	2	2						1	1
Removal by anterior scrotal incision.		Cyst head of epididymis	1	1				1			
Nephrectomy		Rupture of kidney	2	1		1	1	1			
Do		Pyelonephritis	1	1				1			
Nephrotomy		Renal calculus	1	1				1			
Exploratory incision and palpation of kidney, negative for calculi.		Pyelitis	1	1				1			
		Perinephritic abscess	2	2				2			
Laparotomy and cystorrhaphy.		Rupture of bladder	1	1					1		
Perineal cystotomy		Vesical calculus	1	1				1			
Do		Cystitis	2	1		1		1		1	
Supra-pubic cystotomy, combined with external perineal urethrotomy.		Rupture of urethra	1	1				1			
Perineal section		Perineal abscess	4	4			2			2	
Excision of fistulous tract and suture of urethra, and skin surface	1	Fistula of urethra	5	5				1	1	3	
Incision and curettage	2										
Incision and cautery	2										
Incision and curettage	1										
Incision and drainage	5	Periurethral abscess	7	7					1	5	1
Urethrotomy	1										

TABLE No. 58.—*Surgical operations performed by officers of the Medical Corps, on officers and enlisted men of the army, during the calendar year 1909*—Continued.

Operation.	Disease or injury.	Cases.	Result.				Anesthetic.				
			Successful.	Partially successful.	Failure.	Died.	Chloroform.	Ether.	Chloroform and ether.	Local.	None.
	Genito-urinary system—Con.										
Rapid dilatation ..... 2 Internal urethrotomy.... 12	Stricture of urethra.....	14	14	...	...	...	....	6	....	7	1
Meatotomy.....	Stricture of meatus.....	6	6	...	...	...	....	.....	....	5	1
Restoration by incision through cicatrix.	Cicatricial obliteration of meatus.	1	1	...	...	...	....	.....	....	1	...
Szymanowski's operation....	Hypospadias.....	1	.....	...	1	...	....	1	.....	.....	...
Circumcision.....	Phimosis and paraphimosis..... 207 Elongated prepuce, and redundant prepuce... 139 Venereal disease..... 40 Malformation of prepuce 2 Balanitis..... 6	394	394	...	...	...	44	35	5	310	...
Excision..... 3 Curettage and cautery.... 1	Venereal warts.....	4	2	...	2	...	....	2	....	2	...
Excision anterior part of scrotum, and of subcutaneous tissue of penis and scrotum.	Chronic lymphangitis of penis and scrotum.	1	1	...	...	...	....	1	.....	.....	...
Incision and drainage.....	Abscess of scrotum.....	1	1	...	...	...	.....	.....	1	.....	...
Removal of cyst contents and sac.	Cyst of scrotum.....	1	1	...	...	...	....	1	.....	.....	...
Ablation.....	Redundant scrotum.....	1	1	...	...	...	....	1	.....	.....	...
	Vascular system.										
Incision and ligation.....	Artereal aneurism base of brain.	1	1	...	...	...	....	1	.....	.....	...
Ligation.....	Injury to brachial artery....	1	1	...	...	...	....	1	.....	.....	...
Do.....	Injury to radial artery.....	2	2	...	...	...	.....	.....	.....	.....	2
Do.....	Injury to super-palmar arch.	1	1	...	...	...	....	1	.....	.....	...
Do.....	Injury to tibialis anticus artery.	1	1	...	...	...	....	1	.....	.....	...
Excision of vein.....	Thrombo-phlebitis.....	1	1	...	...	...	....	1	.....	.....	...
Schede's operation..... 1 Excision..... 8 Multiple ligation..... 14 Ligation and excision.... 7 Excision and avulsion... 1 Ligation of veins, and removal in sections..... 1	Varicose veins.....	32	32	...	...	...	3	23	1	5	...
	Nervous system.										
Neuroplasty.....	Punctured wound, severing external popliteal nerve.	1	1	...	...	...	....	1	.....	.....	...
Laminectomy fifth and sixth dorsal vertebrae.	Paraplegia below umbilicus.	1	1	...	...	...	.....	.....	1	.....	...
	Skin and cellular tissues.										
Incision and curettage.....	Tubercular abscess, neck....	1	1	...	...	...	....	1	.....	.....	...
Do.....	Tubercular sinus.....	1	1	...	...	...	....	1	.....	.....	...
Do..... 2 Excision of fistulous tract. 1	Fistula.....	3	3	...	...	...	1	.....	.....	2	...
Incision and drainage.....	Sinus.....	3	3	...	...	...	....	1	....	2	...
Do..... 33 Excision..... 1	Cellulitis.....	34	34	...	...	...	2	2	....	20	10
Multiple incision.....	Streptococcus infection.....	2	2	...	...	...	2	.....	.....	.....	...
Incision and drainage... 234 Incision and curettage.. 7 Do..... 6	Abscess.....	241	236	3	1	[a] 1	9	25	2	134	71
Incision and drainage..... 7 Do.....	Carbuncle.....	13	13	...	...	...	....	2	....	4	7
Do.....	Whitlow.....	1	1	...	...	...	....	1	.....	.....	...
Do.....	Felon.....	9	9	...	...	...	....	1	....	7	1
Removal of nail and incision to bone.	Pus infection, great toe.....	1	1	...	...	...	....	1	....	.....	...

[a] Died of pyemia.

TABLE No. 58.—*Surgical operations performed by officers of the Medical Corps, on officers and enlisted men of the army, during the calendar year 1909*—Continued.

Operation.	Disease or injury.	Cases.	Result.				Anesthetic.				
			Successful.	Partially successful.	Failure.	Died.	Chloroform.	Ether.	Chloroform and ether.	Local.	None.
	Skin and cellular tissues—Continued.										
Skin grafting (Thiersch)	Ulcerated area due to burn	1	1				1				
Skin grafting	Old contusion of ankle	1	1				1				
Curettage	Ulcer	2	2							2	
Cotting's operation 20 Keller's operation 9 Anger's operation 7 Excision 108 Partial excision of nail and matrix 15 Avulsion and removal of matrix 7	Ingrowing toe nail	166	165	1			2	8	10	139	7
Removal of nail	Onychauxis	1	1							1	
Removal of scar tissue and formation of skin flaps 1 Dissection of scar 5	Cicatrix	6	5		1			4		2	
Removal by blunt dissection	Callus	1		1				1			
Excision	Nevus	1	1							1	
Do	Pigmented mole	1	1					1			
Abscission	Tattoo mark on chin	1	1								1
	Lymphatic system.										
Excision of gland	Glandular tuberculosis of jaw	1	1				1				
Excision 6 Incision and drainage 2 Incision and curettage 1	Adenitis, cervical	9	9					5		3	1
Incision 2 in. long anterior border and 2½ in. long posterior border, sterno-mastoid 1 Excision 5	Adenitis, tubercular cervical	6	5	1			2	4			
Do	Adenitis tubercular, site not stated	1	1					1			
Incision and drainage 4 Incision and curettage 4	Adenitis, axillary	8	8					2		3	3
Incision and drainage 339 Incision and curettage 225 Excision of gland 188 Curettage and injection 5 Incision and packing 1	Adenitis inguinal venereal 625 Adenitis inguinal non-venereal 54 Adenitis inguinal, character not stated 79	758	756		2		41	274	21	369	53
Curettage and injection 5 Excision of gland 4 Incision and drainage 6	Adenitis, character and site not stated	15	15				2	10		3	
	Muscles, tendons, fasciæ, ligaments and bursæ.										
Tenorrhaphy	Incised wound, extensor communis digitorum	1	1							1	
	Incised wound, wrist	2	2				1				1
	Severed tendons, hand	1	1				1				
	Divided tendon	3	3					1			2
	Incised wound, index finger	1	1				1				
Tenorrhaphy, tendon extensor longus digitorum	Incised wound of foot	1	1							1	
Tenotomy flexor tendons second, third, and fourth toes 1 Tenotomy flexor tendons 1 Subcutaneous division of lateral and glenoid ligaments 2	Hammer toe	4	4				2		1		1
Hardie's operation	Dupuytren's contraction	1		1				1			
Separation of adhesions and passive motion	Adhesions, extensor tendons left foot	1	1					1			

TABLE No. 58.—*Surgical operations performed by officers of the Medical Corps, on officers and enlisted men of the army, during the calendar year 1909*—Continued.

Operation.	Disease or injury.	Cases.	Result.			Anesthetic.				
			Successful.	Partially successful.	Failure.	Died.	Chloroform.	Ether.	Chloroform and ether.	Local.	None.
	Muscles, tendons, fasciæ, ligaments and bursæ—Con.										
Incision	Rigid flexion of toe	1	1							1	
Incision and replacement	Dislocation of tendon	1		1			1				
Excision	Rider's bone, tendon of adductor longus.	1	1					1			
Tenotomy	Hypertrophy of tendon	3	3							3	
Excision of scars, and uniting of fascia.	Hernia of muscle, name not stated.	2	2				2				
Suturing sheath of muscle	Hernia of adductor longus	1	1					1			
Suturing and drainage	Severed muscle	2	2							2	
Exploratory incision	Myositis	1	1					1			
Excision	Ganglion	7	7					3		3	1
Incision and drainage 5 Incision and curettage 2 Dissection of sac 4	Bursitis	11	8	3				6		4	1
Partial excision, distal end first metatarsal 2 Keller's operation 1 Excision 9	Bunion	12	12				1	7		4	
	Bones.										
Trephining, and removal of clots and fragments of bone 3 Removal of bone fragments 2	Fracture of skull (3 by gunshot)	5	1			4	2	1			
Exploratory incision of scalp	Suspected fracture of skull	1	1								1
Setting fracture and wiring	Fracture of inferior maxilla	5	5					3		1	1
Osteotomy and removal of sharp fragments.	Fracture of clavicle	1	1				1				
Wiring	Fracture of ulna and radius, faulty union.	1	1					1			
Removal of bone fragments	Gunshot wound of hand	1		1				1			
Incision and drainage	Periostitis of finger	2	2							2	
	Osteo-arthritis of finger	1	1							1	
Excision of tumor and drainage.	Osteo-sarcoma fourth rib	1	1					1			
Removal of necrotic bone and excision of sinus.	Osteomyelitis, tubercular, of rib, with discharging sinus.	1	1							1	
Excision of bone spiculae	Fracture of femur (1 by gunshot).	2	2				2				
Removal by forceps and curet, of bone fragments, in false joint.	Old fracture of femur by gunshot.	1	1					1			
Periosteotomy	Osteo-periostitis, femur	1			1		1				
Mediate suture 4 Fragments united by kangaroo tendon and silver wire 1 Fragments united by ligature 1	Fracture of patella	6	3	2	1			6			
Incision setting and wiring	Fracture both bones of leg	2	2				1		1		
Removal of overlapping ends both fragments, and approximation 1 Subcutaneous tenotomy tendo-Achilles, breaking and resetting tibia 1	Simple fracture both bones of leg, with vicious union	2			2			2			
Exploratory incision	Old fracture both bones of leg with faulty union.	1	1				1				
Exposing site of fracture, freshening ends of tibia, and nailing with silver nails.	Ununited fracture both bones of leg.	1		1				1			
Removal of small tubercular periosteal growth.	Osteo-periostitis, tubercular, right tibia.	1	1				1				

TABLE No. 58.—*Surgical operations performed by officers of the Medical Corps, on officers and enlisted men of the army, during the calendar year 1909*—Continued.

Operation.	Disease or injury.	Cases.	Result.				Anesthetic.				
			Successful.	Partially successful.	Failure.	Died.	Chloroform.	Ether.	Chloroform and ether.	Local.	None.
	Bones—Continued.										
Incision and curettage	Osteitis, tubercular tibia	1	1					1			
Do	Osteo-periostitis tibia	1	1							1	
Do	Periostitis of tibia	1	1					1			
Removal of dead bone by curet.	Necrosis of tibia and fibula	1	1					1			
Curettage	Necrosis of tibia	1		1				1			
Exploratory operation, extensor tendons, lower third right leg.	Convalescing from operation for suspected necrosis of tibia.	1			1					1	
Excision of necrotic area	Necrosis, bone not stated	6	6				1	3		2	
Osteotomy 6 Exploratory operation 1	Exostosis	7	5	1	1		3	3		1	
	Joints.										
Incision and reduction	Dislocation of malar bone	1	1					1			
Resection of joint	Old gunshot wound elbow joint, with resulting ankylosis.	1	1					1			
Aspiration	Synovitis, elbow joint	1	1								1
Do	Synovitis, gonorrheal, of knee joint.	1	1								1
Do	Synovitis traumatic, joint not stated.	1			1						1
Incision and removal	Floating cartilage, knee joint.	2	2				1			1	
Removal, head of metatarsal bone.	Talipes valgus	1	1				1				
Excision proximal end first phalanx and removal of exostosis 3 Keller's operation 1 Weir's tendon transplantation 5	Hallux valgus	9	9				2	4	3		
Resection of joint	Dislocation, metatarso-phalangeal joint great toe.	1	1					1			
Division of adhesions	Ankylosis, metatarso-phalangeal joint great toe.	1		1				1			
Excision	Exostosis distal end of first metatarsal bone.	2	2					2			
	Amputations.										
Amputation at shoulder joint	Gunshot wound of arm (infected).	1				[a]1			1		
Amputation arm, site not stated.	Crushing wound arm, lower third.	1	1					1			
Amputation forearm, site not stated.	Contused wound forearm	1	1					1			
Disarticulation, wrist joint	Laceration radio-carpal joint.	1	1					1			
Amputation at middle third of thigh.	Gunshot wound, lower third thigh.	1	1				1				
Amputation at lower third of thigh.	Tubercular arthritis knee-joint.	1	1					1			
Amputation thigh, site not stated.	Lacerated wound of knee and leg.	1	1					1			
Amputation middle third, leg.	Osteo-sarcoma lower third of tibia.	1	1					1			
Amputation right foot	Gangrene of all toes, result of frostbite.	1	1						1		
Amputation, site not stated	Crushing of foot	1	1					1			
Amputation	Necrosis, limb not stated	1	1					1			
Amputation of finger	Gunshot wound, 8; frostbite, 1; other injury, 26; disease, 7; cause not stated, 8.	50	50				12	23		14	1

[a] Died of septicemia.

TABLE No. 58.—*Surgical operations performed by officers of the Medical Corps, on officers and enlisted men of the army, during the calendar year 1909*—Continued.

Operation.	Disease or injury.	Cases.	Result.				Anesthetic.				
			Successful.	Partially successful.	Failure.	Died.	Chloroform.	Ether.	Chloroform and ether.	Local.	None.
	Amputations—Continued.										
Amputation of toe	Gunshot wound, 6; other injury, 8; hammer toe, 11; inflamed corn, 1; other disease, 5; cause not stated, 2.	33	33				5	15		12	1
	Foreign bodies.										
Incision and extraction	Bullet, 21; jacket of bullet, 1; needle, 2; splinter, 6; fish-hook, 2; piece of oyster shell, 1; bit of copper, 1; bit of iron, 1.	35	32		3		2	5		26	2
Dilatation and removal	Lodgment of bone in rectum.	1	1				1				
Do	Lodgment of spicula of bone in internal sphincter ani.	1	1					1			
	Tumors.										
Excision	Adenoma	1	1						1		
Do	Dermoid cyst	1	1				1				
Do	Fibroma	5	5					2		3	
Removal of metacarpal bone, and index finger.	Fibro-enchondroma	1	1					1			
Dorsal incision, and removal of mass from third metacarpal.	Fibro-enchondroma, recurrent.	1		1						1	
Excision	Glandular tumor	1	1					1			
Incision, removal of clot, and drainage.	Hematoma	2	2				1				1
Amputation	Hypertrophy of breast	1	1					1			
Excision	Lipoma	6	6					1		4	1
Do	Myxolipoma	1	1							1	
Do	Retention cyst	1	1				1				
Do	Serous cyst	2	2					2			
Do											
Incision and cautery 1 Incision and curettage 3	Sebaceous cyst	43	43				1	2		34	6
Excision	Tumor, type not stated	2	2					1		1	
	Miscellaneous.										
Incision, curettage, and cautery 2 Incision and drainage 12	Infected wound	14	13			[a]1	4	6		4	
Suturing	Incised wound	18	18							2	16
Suturing and drainage	Lacerated wound	27	27				3	2		5	17
Enlarging, cleansing, and packing of wound 1 Incision and cautery 1 Curettage 1	Punctured wound	3	3					1		1	1
Incision and exploration	Healed wound anterior surface of wrist.	1	1							1	
Incision and drainage	Erysipelas of scalp	1	1				1				
Suturing	Stab wounds left lung and both forearms.	1	1				1				
Uniting radius with silver wire, and remaining structures with kangaroo tendon.	Incised wound forearm, severing skin, extensor tendons, lower end of radius, and disuniting ulna from carpal bones.	1		1			1				
Ligation branches of arteries, cleansing and suturing of wounds.	Incised bolo wounds, frontal and temporal regions, and of shoulder.	1				1	1				
Dissection and readjustment of flaps.	Imperfect result in amputation of thigh.	1	1				1				
Total cases		3,933	3,845	35	23	30	335	1,326	100	1,873	299

[a] Died of septicemia.

TABLE NO. 59.—*Numerical view of the effect of disease and injury on United States troops serving at home and abroad in the year 1909 compared with corresponding data for the year 1908, by races.*

ABSOLUTE NUMBERS.

		Mean strength.	Admitted.			Discharged on surgeon's certificate of disability.			Died.			Total losses.			Noneffective from sickness.	
			Total.	Disease.	Injury.	Total.	Disease.	Injury.	Total.	Disease.	Injury.	Total.	Disease.	Injury.	Days treated.	Constantly non-effective.
White troops	1909	71,025	75,824	61,739	14,085	1,213	1,093	120	346	210	136	1,559	1,303	256	1,076,108	2,948.24
	1908	62,263	72,795	58,886	13,909	1,210	1,087	123	373	206	167	1,583	1,293	290	959,650	2,621.99
Colored troops	1909	3,294	3,176	2,615	561	57	53	4	24	18	6	81	71	10	49,225	134.86
	1908	3,143	4,909	4,092	817	38	28	10	41	29	12	79	57	22	62,040	169.51
Porto Rican troops	1909	567	674	617	57	6	5	1	7	4	3	13	9	4	8,906	24.40
	1908	564	701	658	43	4	4	.....	4	3	1	8	7	1	7,641	20.88
Filipino troops	1909	5,369	5,036	4,462	574	80	76	4	41	34	7	121	110	11	68,806	188.51
	1908	5,085	5,378	4,616	762	54	53	1	43	29	14	97	82	15	65,337	178.52

PROPORTIONAL NUMBERS.

		Mean strength.	Admitted.			Discharged on surgeon's certificate of disability.			Died.			Total losses.			Constantly non-effective.	Days treated.	
			Total.	Disease.	Injury.	Total.	Disease.	Injury.	Total.	Disease.	Injury.	Total.	Disease.	Injury.		Each soldier.	Each case.
White troops	1909	71,025	1,067.57	869.26	198.31	16.82	15.16	1.66	4.80	2.91	1.89	21.62	18.07	3.55	41.51	15.15	14.19
	1908	62,263	1,169.15	945.76	223.39	18.81	16.90	1.91	5.80	3.20	2.60	24.61	20.10	4.51	42.11	15.42	13.18
Colored troops	1909	3,294	964.18	793.87	170.31	17.30	16.09	1.21	7.29	5.46	1.82	24.59	21.55	3.03	40.94	14.94	15.50
	1908	3,143	1,561.88	1,301.94	259.94	11.95	8.81	3.15	12.90	9.12	3.77	24.85	17.93	6.92	53.93	19.74	12.64
Porto Rican troops	1909	567	1,188.71	1,088.18	100.53	10.58	8.82	1.76	12.35	7.05	5.29	22.93	15.87	7.05	43.03	15.71	13.21
	1908	564	1,242.91	1,166.67	76.24	7.09	7.09	.....	7.09	5.32	1.77	14.18	12.41	1.77	37.02	13.55	10.90
Filipino troops	1909	5,369	937.98	831.07	106.91	14.44	13.72	.72	7.40	6.14	1.26	21.84	19.86	1.98	35.11	12.82	13.66
	1908	5,085	1,057.62	907.77	149.85	10.38	10.19	.19	8.26	5.57	2.69	18.64	15.76	2.88	35.11	12.85	12.15

TABLE NO. 60.—*Admissions to sick report, discharges, and deaths, with ratios per 1,000 of mean strength, in which all available data for the period 1899–1908 are placed in comparison with the year 1909.*

Causes of admission to sick report.	United States Army 1899–1908.						American troops, Army 1909.					
Mean strength	S. G. O. 655,000 (mean annual 65,500). A. G. O. 663,438 (mean annual 66,344).						S. G. O. 74,319. A. G. O. 75,399.					
	Admissions.		Discharges.		Deaths.		Admissions.		Discharges.		Deaths.	
	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.
Typhoid fever	4,709	7.19	25	0.04	498	0.75	267	3.59			19	0.25
Malarial fevers, total	158,900	242.60	165	.25	246	.37	2,855	38.42	1	0.01	2	.03
Intermittent	124,817	190.56	4	.006	3	.005	2,196	29.55				
Aestivo-autumnal	29,329	44.78	3	.005	201	.30	560	7.54			2	.03
Other malarial diseases	4,754	7.26	158	.24	42	.06	99	1.33	1	.01		
Smallpox	527	.80			101	.15	2	.03				
Measles	7,221	11.02	11	.02	92	.14	580	7.80			8	.11
Eruptive fevers, others	1,156	1.76			2	.003	162	2.18			1	.01
Diphtheria	270	.41			10	.02	35	.47			3	.04
Influenza	18,868	28.81			7	.01	2,008	27.02			1	.01
Asiatic cholera	543	.83			319	.48						
Cholera nostras	925	1.41					2	.03				
Dysentery	27,144	41.44	506	.76	859	1.29	675	9.08	5	.07	14	.19
Yellow fever	445	.68			92	.14						
Leprosy	2	.003					1	.01	2	.03	1	.01
Beriberi	60	.09	6	.01	9	.01	3	.04				
Erysipelas	572	.87			12	.02	31	.42	1	.01	2	.03
Dengue	17,126	26.15			1	.002	1,695	22.81			1	.01
Mumps	7,676	11.72					720	9.69				
Cerebrospinal fever, including meningitis	224	.34	22	.03	120	.18	19	.26	2	.03	12	.16
Purulent infection and septicemia	138	.21	5	.01	69	.10	11	.15	1	.01	5	.07
Tuberculosis, all	3,046	4.65	1,612	2.43	457	.69	350	4.70	171	2.27	43	.57
Total venereal	112,255	171.38	2,110	3.18	34	.05	14,640	196.99	206	2.73		
Syphilis and its results	16,054	24.51	1,483	2.24	28	.04	2,263	30.45	122	1.61		
Chancroid and its results	23,781	36.31	30	.05			2,287	30.77				
Gonorrhea and its results	72,420	110.56	597	.90	6	.01	10,090	135.77	84	1.12		
Cancer and other malignant growths	142	.22	28	.04	47	.07	10	.13	4	.05	2	.02
Rheumatism, acute articular	4,994	7.62	24	.04	7	.01	567	7.63	2	.03	1	.01
Rheumatism, subacute and chronic articular	4,367	6.67	380	.57	1	.002	413	5.56	24	.32		
Alcoholism and its results	16,776	25.61	124	.19	148	.22	1,775	23.88	22	.29	7	.09
Insanity	1,125	1.72	910	1.37	7	.01	120	1.62	109	1.45	1	.01
Diseases of the brain and spinal cord	1,563	2.39	423	.64	78	.12	15	.20	8	.11	4	.05

TABLE NO. 60.—*Admissions to sick report, discharges, and deaths, with ratios per 1,000 of mean strength, in which all available data for the period 1899–1908 are placed in comparison with the year 1909*—Continued.

Causes of admission to sick report.	United States Army 1899–1908.						American troops, Army 1909.					
Mean strength	S. G. O. 655,000 (mean annual 65,500). A. G. O. 663,438 (mean annual 66,344).						S. G. O. 74,319. A. G. O. 75,399.					
	Admissions.		Discharges.		Deaths.		Admissions.		Discharges.		Deaths.	
	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.
Tetanus	14	0.02			11	0.02						
Diseases of the heart	3,327	5.08	972	1.47	217	.33	197	2.65	71	0.95	26	0.35
Varicocele	2,789	4.26	70	.11			207	2.79	1	.01		
Adenitis, nonvenereal	4,361	6.66	9	.01			431	5.80				
Lymphangitis	509	.78	9	.01	1	.002	29	.39				
Coryza and other diseases of the nasal fossæ	8,258	12.61	65	.10			1,819	24.47	4	.05		
Bronchitis, acute and chronic	34,774	53.09	60	.09	7	.01	2,521	33.92	3	.04		
Pneumonia, all	2,145	3.27	12	.02	306	.46	175	2.35			25	.33
Pleurisy	2,262	3.45	73	.11	22	.03	190	2.56	10	.13	3	.04
Tonsillitis and other diseases of the pharynx	38,818	59.26	1	.002	3	.005	5,067	68.18	1	.01	1	.01
Gastritis	14,525	22.18	67	.10	21	.03	872	11.73	10	.13		
Diarrhea and enteritis	106,968	163.31	146	.22	186	.28	2,507	33.73	5	.07	2	.03
Peritonitis (simple)	109	.17	7	.01	49	.07	8	.11			1	.01
Inguinal and other herniæ	3,273	5.00	606	.91	3	.005	268	3.60	32	.43		
Appendicitis	2,370	3.62	63	.09	95	.14	347	4.67	7	.09	6	.08
Diseases of the kidneys	1,701	2.60	170	.26	174	.26	125	1.68	18	.23	12	.16
Periostitis	730	1.11	28	.04	1	.002	50	.67	2	.03		
Arthritis and synovitis	4,207	6.42	196	.30			228	3.06	10	.14		
All other diseases	281,497	429.77	4,658	7.02	568	86	22,357	300.82	414	5.49	25	.33
Total for diseases	903,411	1,379.25	13,563	20.44	4,880	7.36	64,354	865.92	1,146	15.20	228	3.02
Total for injuries	142,393	217.39	1,895	2.86	2,321	3.50	14,646	197.07	124	1.64	142	1.88
Grand total	1,045,804	1,596.65	15,458	23.30	7,201	10.85	79,000	1,062.99	1,270	16.84	370	4.90

TABLE NO. 61.—*Admissions to sick report, discharges, deaths, and noneffectiveness, with ratios per 1,000 of mean strength, for the army—officers and total enlisted—for the year 1909.*

Causes of admission to sick report.	Officers U. S. Army.								American troops, army.							
Mean strength	S. G. O., 3,822—A. G. O., 4,283.								S. G. O., 74,319—A. G. O., 75,399.							
	Admissions.		Retirement for disability.		Deaths.		Noneffective.		Admissions.		Discharges.		Deaths.		Noneffective.	
	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.
Typhoid fever, including paratyphoid fever	11	2.88			1	0.23	2.55	0.67	267	3.59			19	0.25	47.71	0.64
Fevers, undetermined	12	3.14					.18	.05	470	6.32					7.22	.10
Malarial fevers	102	26.69					3.02	.79	2,855	38.42	1	0.01	2	.03	62.38	.84
Intermittent	63	16.48					1.16	.30	2,196	29.55					42.90	.58
Aestivo-autumnal	33	8.63					1.43	.37	560	7.54			2	.03	15.00	.20
Malarial cachexia, and undetermined infection	6	1.57					.43	.11	99	1.33	1	.01			4.48	.06
Smallpox									2	.03					.23	.003
Measles	1	.26					.04	.01	580	7.80			8	.11	36.19	.49
Scarlet fever	1	.26					.19	.05	23	.31			1	.01	1.90	.03
Diphtheria									35	.47			3	.04	1.90	.03
Influenza	195	51.02					3.61	.95	2,008	27.02			1	.01	31.97	.43
Cholera nostras									2	.03					.02	.0003
Dysentery	18	4.71	3	0.70			2.65	.69	675	9.08	5	.07	14	.19	57.16	.77
Amebic	12	3.14	3	.70			2.21	.58	319	4.29	5	.07	3	.04	35.05	.47
Bacillary	2	.52					.24	.06	155	2.09			6	.08	12.05	.16
Mixed infections and other dysenteries	4	1.05					.21	.05	201	2.70			5	.07	10.06	.14
Leprosy									1	.01	2	.03	1	.01	2.13	.03
Beriberi									3	.04					.50	.01
Erysipelas	3	.78					.07	.02	31	.42	1	.01	2	.03	1.64	.02
Dengue	93	24.33					1.88	.49	1,695	22.81			1	.01	29.81	.40
Mumps	7	1.83					.29	.08	720	9.69					30.32	.41
Cerebrospinal meningitis, epidemic									14	.19	2	.03	8	.11	1.57	.02
Yaws (frambesia)									1	.01					.42	.01
Vaccinia	1	.26					.01	.001	1,130	15.20					17.20	.23
Purulent infection and septicemia	3	.78			1	.23	.24	.07	11	.15	1	.01	5	.07	1.05	.01
Trichinosis									1	.01					.28	.004
Tuberculosis (all)	12	3.14	3	.70			11.39	2.98	350	4.70	171	2.27	43	.57	201.93	2.72
Tuberculosis, pulmonary	11	2.88	2	.47			10.96	2.87	297	4.00	160	2.12	35	.46	191.02	2.57
Tuberculosis of other organs	1	.26	1	.23			.43	.11	53	.71	11	.15	8	.11	10.91	.15

TABLE No. 61.—*Admissions to sick report, discharges, deaths, and noneffectiveness, with ratios per 1,000 of mean strength, for the army—officers and total enlisted—for the year 1909*—Continued.

Causes of admission to sick report.	Officers U. S. Army.								American troops, army.							
Mean strength	S. G. O., 3,822—A. G. O., 4,283.								S. G. O., 74,319—A. G. O., 75,399.							
	Admissions.		Retirement for disability.		Deaths.		Noneffective.		Admissions.		Discharges.		Deaths.		Noneffective.	
	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.
Venereal diseases (all)	34	8.90					3.12	0.82	14,640	196.99	206	2.73			971.25	13.07
Syphilis and its results	7	1.83					.88	.23	2,263	30.45	122	1.62			225.83	3.04
Chancroid and its results	4	1.05					.40	.10	2,287	30.77					134.67	1.81
Gonorrhea and its results	23	6.02					1.83	.48	10,090	135.77	84	1.11			610.75	8.22
Cancer and other malignant growths	1	.26			1	0.23	.89	.23	10	.13	4	.05	2	0.03	1.68	.02
Rheumatism, articular (all)	18	4.71					1.47	.38	980	13.19	26	.34	1	.01	68.09	.91
Rheumatic fever	10	2.62					.42	.11	567	7.63	2	.03	1	.01	34.46	.46
Rheumatism, subacute and chronic, articular	8	2.09					1.05	.28	413	5.56	24	.32			33.63	.45
Alcoholism and its results	23	6.02					.62	.16	1,775	23.88	22	.29	7	.09	23.33	.31
Insanity	2	0.52	3	0.70			.54	.14	120	1.61	109	1.45	1	.01	21.07	.28
Epilepsy	1	.26					.01	.001	129	1.74	58	.77			10.46	.14
Trachoma	1	.26					.27	.07	32	.43	4	.05			3.69	.05
Organic disease of the heart	11	2.88	9	2.10	2	.47	2.44	.64	187	2.52	69	.91	26	.34	24.16	.32
Aneurism	1	.26	2	.47	1	.23	.50	.13	9	.12	6	.08	3	.04	2.68	.04
Filariasis	1	.26					.02	.004	2	.03					.29	.004
Chyluria									1	.01					.25	.003
Lymphangitis and elephantoid fever	1	.26					.02	.004								
Other filariasis									1	.01					.03	.0004
Functional diseases of the heart	3	.78	1	.23			.39	.10	178	2.40	23	.31			11.79	.16
Bronchitis, acute and chronic	155	40.55					2.38	.62	2,521	33.92	3	.04			49.33	.66
Broncho-pneumonia	3	.78					.21	.06	21	.28			3	.04	2.17	.03
Pneumonia (pneumonic fever)	4	1.05					.37	.10	154	2.07			22	.29	12.16	.16
Diarrhea and enteritis	127	33.23	1	.23			2.08	.54	2,507	33.73	5	.07	2	.03	38.74	.52
Intestinal parasites	7	1.83					.04	.01	387	5.21	1	.01			7.55	.10
Tenia saginata	2	.52					.01	.002	65	.87					1.08	.01
Tenia solium									31	.42					.44	.01
Hymenolepsis nana									2	.03					.12	.002
Bothriocephalus latus									4	.05					.03	.0004
Ascaris lumbricoides	3	.78					.02	.01	19	.26					.77	.01
Oxyuris vermicularis									2	.03					.02	.0003
Ankylostomum duodenale									136	1.83	1	.01			2.59	.03
Necator Americanus	1	.26					.01	.001	127	1.71					2.49	.03
Other intestinal parasites	1	.26					.01	.001	1	.01					.01	.0001

Inguinal and other hernia	12	3.14	1	.23			2.71	.71	268	3.61	32	.42			29.43	.40
Hepatic abscess	2	.52			1	.23	.55	.14	22	.30	1	.01	7	.09	4.79	.06
Appendicitis	31	8.11	1	.23			4.97	1.30	347	4.67	7	.09	6	.08	33.58	.45
Climatic bubo									7	.09					.63	.01
Tropical ulcer	2	.52					.06	.02	23	.31					1.41	.02
Jiggers (pulex penetrans)									10	.13					.24	.003
Pemphigus contagiosus	2	.52					.03	.01	49	.66					1.55	.02
Dhobie itch									212	2.85					4.63	.06
Tenia imbricata									10	.13					.15	.002
Prickly heat									20	.27					.34	.005
Acute nephritis	4	1.05			1	.23	.25	.07	28	.38			5	.07	3.65	.05
Chronic nephritis	21	5.49	1	.23	2	.47	2.44	.64	45	.61	18	.21	7	.09	7.42	.10
Malingering									70	.94					1.97	.03
External causes, special.																
Fractures, exclusive of gunshot	34	8.90	1	.23			4.13	1.08	804	10.82	32	.42	24	.32	99.33	1.34
Dislocations	12	3.14					.99	.26	219	2.95	2	.03			10.16	.14
Sprains and muscular strains	120	31.40					4.15	1.09	4,230	56.92	10	.13			89.29	1.20
Wounds, gunshot	5	1.31	3	.70	2	.47	1.05	.28	215	2.89	18	.24	51	.68	24.63	.33
Wounds other than gunshot	42	10.99					1.69	.44	3,218	43.30	18	.24	7	.09	79.01	1.06
Sunstroke	1	.26					.03	.01	7	.09	1	.01			.36	.004
Frostbite and general freezing	1	.26					.01	.001	85	1.14	3	.04			2.10	.03
Drowning													28	.37		
Poisoning, acute	12	3.14					.19	.05	315	4.24			11	.15	3.28	.04
Venomous bites, etc	8	2.09					.09	.02	86	1.16					1.50	.02
Snake bite									2	.03					.09	.001
Other venomous bites, etc	8	2.09					.09	.02	84	1.13					1.41	.02
Diseases and injuries grouped.																
General diseases	544	142.33	8	1.87	4	.93	34.03	8.90	28,396	382.08	476	6.31	121	1.60	1,612.09	21.69
Infectious diseases	439	114.86	3	.70	1	.23	14.35	3.75	10,387	139.76	11	.15	60	.80	327.97	4.41
Other general diseases	105	27.47	5	1.17	3	.70	19.68	5.15	18,009	242.32	465	6.17	61	.81	1,284.12	17.28
Diseases of the nervous system and organs of special sense	188	49.19	15	3.50	2	.47	17.45	4.57	2,955	39.76	280	3.71	10	.13	153.34	2.06
Of the nervous system	102	26.69	13	3.04	2	.47	12.76	3.34	1,253	16.86	220	2.92	10	.13	84.16	1.13
Of the eye and its adnexa	66	17.27					2.77	.72	1,121	15.08	32	.42			39.96	.54
Of the ear and its adnexa	20	5.23	2	.47			1.92	.50	581	7.82	28	.37			29.22	.39
Diseases of the circulatory system	59	15.44	13	3.04	3	.70	5.11	1.34	1,681	22.62	112	1.49	33	.44	103.01	1.39
Diseases of the respiratory system	314	82.16					7.33	1.92	5,209	70.09	33	.44	29	.38	115.44	1.55
Diseases of the digestive system	601	157.25	4	.93	3	.70	19.13	5.00	14,812	199.30	72	.95	22	.29	317.80	4.28
Diseases of the genito-urinary system	52	13.61	2	.47	3	.70	4.53	1.18	1,050	14.13	51	.68	12	.16	49.63	.67
Diseases of the skin and cellular tissue	120	31.40	2	.47			5.89	1.54	6,512	87.62	9	.12			170.09	2.29
Diseases of the organs of locomotion	99	25.90	1	.23			4.08	1.07	2,308	31.06	41	.54			80.42	1.08
Malformations, etc									130	1.75	71	.94			12.84	.17
Diseases, results of old age			1	.23					1	.01					.02	.0002
Ill-defined diseases	35	9.16					.95	.25	1,300	17.49	1	.01	1	.01	32.81	.44
Total for diseases	2,012	526.43	46	10.74	15	3.50	98.50	25.77	64,354	865.92	1,146	15.20	228	3.02	2,647.49	35.62
External causes	392	102.56	5	1.17	3	.70	17.20	4.50	14,646	197.07	124	1.64	142	1.88	435.61	5.86
Total for diseases and external causes	2,404	628.99	51	11.91	18	4.20	115.70	30.27	79,000	1,062.99	1,270	16.84	370	4.91	3,083.10	41.48

TABLE No. 62.—*Admissions to sick report, discharges, deaths, and noneffectiveness, with ratios per 1,000 of mean strength, for the year 1909, United States Army.*

Causes of admission to sick report.	Army, total.								Army, white.								Army, colored.							
Mean strength	S. G. O., 74,319—A. G. O., 75,399.								S. G. O., 71,025—A. G. O., 72,105.								S. G. O., 3,294—A. G. O., 3,294.							
	Admissions.		Discharges.		Deaths.		Noneffective.		Admissions.		Discharges.		Deaths.		Noneffective.		Admissions.		Discharges.		Deaths.		Noneffective.	
	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.
Typhoid fever (including paratyphoid fever)	267	3.59			19	0.25	47.71	0.64	263	3.70			18	0.25	46.97	0.66	4	1.21			1	0.30	0.74	0.22
Fevers, undetermined	470	6.32					7.22	.10	452	6.36					6.98	.10	18	5.46					.24	.07
Malarial fevers	2,855	38.42	1	0.01	2	.03	62.38	.84	2,734	38.49	1	0.01	2	.03	60.34	.85	121	36.73					2.04	.62
Intermittent	2,196	29.55					42.90	.58	2,092	29.45					41.18	.58	104	31.57					1.72	.52
Aestivo-autumnal	560	7.54			2	.03	15.00	.20	549	7.73			2	.03	14.75	.21	11	3.34					.25	.07
Malarial cachexia and undetermined infection	99	1.33	1	.01			4.48	.06	93	1.31	1	.01			4.40	.06	6	1.82					.08	.02
Smallpox	2	.03					.23	.003	1	.01					.22	.003	1	.30					.01	.003
Measles	580	7.80			8	.11	36.19	.49	580	8.17			8	.11	36.19	.51								
Scarlet fever	23	.31			1	.01	1.90	.03	22	.31			1	.01	1.75	.02	1	.30					.15	.05
Diphtheria	35	.47			3	.04	1.90	.03	35	.49			3	.04	1.85	.03							.05	.02
Influenza	2,008	27.02			1	.01	31.97	.43	2,000	28.16			1	.01	31.81	.45	8	2.43					.16	.05
Cholera nostras	2	.03					.02	.0003	2	.03					.02	.0003								
Dysentery	675	9.08	5	.07	14	.19	57.16	.77	636	8.95	5	.07	13	.18	54.14	.76	39	11.84			1	.30	3.02	.92
Amebic	319	4.29	5	.07	3	.04	35.05	.47	292	4.11	5	.07	2	.03	32.39	.46	27	8.20			1	.30	2.66	.81
Bacillary	155	2.09			6	.08	12.05	.16	150	2.11			6	.08	11.93	.17	5	1.52					.12	.04
Mixed infections and other dysenteries	201	2.70			5	.07	10.06	.14	194	2.73			5	.07	9.82	.14	7	2.13					.24	.07
Leprosy	1	.01	2	.03	1	.01	2.13	.03	1	.01	2	.03	1	.01	2.13	.03								
Beriberi	3	.04					.50	.01	2	.03					.32	.005	1	.30					.18	.05
Erysipelas	31	.42	1	.01	2	.03	1.64	.02	31	.44	1	.01	2	.03	1.64	.02								
Dengue	1,695	22.81			1	.01	29.81	.40	1,637	23.05			1	.01	28.80	.41	58	17.61					1.01	.31
Mumps	720	9.69					30.32	.41	720	10.14					30.31	.43							.01	.004
Cerebrospinal meningitis, epidemic	14	.19	2	.03	8	.11	1.57	.02	14	.20	2	.03	8	.11	1.57	.02								
Yaws (frambesia)	1	.01					.42	.01							.06	.001	1	.30					.36	.11
Vaccinia	1,130	15.20					17.20	.23	1,119	15.76					17.03	.24	11	3.34					.17	.05
Purulent infection and septicemia	11	.15	1	.01	5	.07	1.05	.01	11	.15	1	.01	5	.07	1.05	.01								
Trichinosis	1	.01					.28	.004	1	.01					.28	.003								

Tuberculosis (all)	350	4.70	171	2.27	43	.57	201.93	2.72	333	4.69	158	2.19	38	.53	188.71	2.66	17	5.16	13	3.95	5	1.52	13.22	4.01
Tuberculosis, pulmonary	297	4.00	160	2.12	35	.46	191.02	2.57	286	4.03	147	2.04	32	.44	178.60	2.51	11	3.34	13	3.95	3	.91	12.42	3.77
Tuberculosis of other organs	53	.71	11	.15	8	.11	10.91	.15	47	.66	11	.15	6	.08	10.11	.15	6	1.82			2	.61	.80	.24
Venereal diseases (all)	14,640	196.99	206	2.73			971.25	13.07	13,714	193.09	190	2.64			917.87	12.92	926	281.12	16	4.86			53.38	16.21
Syphilis and its results	2,263	30.45	122	1.62			225.83	3.04	2,159	30.40	110	1.53			216.27	3.04	104	31.57	12	3.64			9.56	2.90
Chancroid and its results	2,287	30.77					134.67	1.81	2,121	29.86					124.71	1.76	166	50.39					9.96	3.02
Gonorrhea and its results	10,090	135.77	84	1.11			610.75	8.22	9,434	132.83	80	1.11			576.89	8.12	656	199.15	4	1.21			33.86	10.28
Cancer and other malignant growths	10	.13	4	.05	2	.03	1.68	.02	10	.14	4	.06	2	.03	1.59	.02							.09	.03
Rheumatism, articular (all)	980	13.19	26	.34	1	.01	68.09	.91	942	13.26	26	.36	1	.01	66.02	.93	38	11.54					2.07	.63
Rheumatic fever	567	7.63	2	.03	1	.01	34.46	.46	540	7.60	2	.03	1	.01	33.07	.47	27	8.20					1.39	.42
Rheumatism, subacute and chronic, articular	413	5.56	24	.32			33.63	.45	402	5.66	24	.33			32.95	.46	11	3.34					.68	.21
Alcoholism and its results	1,775	23.88	22	.29	7	.09	23.33	.31	1,755	24.71	22	.31	7	.10	23.03	.32	20	6.07					.30	.09
Insanity	120	1.61	109	1.45	1	.01	21.07	.28	114	1.61	101	1.40	1	.01	19.15	.26	6	1.82	8	2.43			1.92	.58
Epilepsy	129	1.74	58	.77			10.46	.14	129	1.82	58	.80			10.46	.15								
Trachoma	32	.43	4	.05			3.69	.05	32	.45	4	.06			3.69	.05								
Organic disease of the heart	187	2.52	69	.91	26	.34	24.16	.32	172	2.42	66	.92	20	.28	21.21	.30	15	4.55	3	.91	6	1.82	2.94	.90
Aneurism	9	.12	6	.08	3	.04	2.68	.04	7	.10	6	.08	3	.04	2.36	.03	2	.61					.33	.10
Filariasis	2	.03					.29	.004	1	.01					.25	.003	1	.30					.03	.01
Chyluria	1	.01					.25	.003	1	.01					.25	.003								
Other filariasis	1	.01					.03	.0004									1	.30					.03	.01
Functional diseases of the heart	178	2.40	23	.31			11.79	.16	177	2.49	23	.32			11.79	.17	1	.30					.01	.002
Bronchitis, acute and chronic	2,521	33.92	3	.04			49.33	.66	2,425	34.14	3	.04			47.79	.67	96	29.14					1.53	.47
Broncho-pneumonia	21	.28			3	.04	2.17	.03	20	.28			3	.04	1.96	.03	1	.30					.21	.06
Pneumonia (pneumonic fever)	154	2.07			22	.29	12.16	.16	140	1.97			20	.28	11.35	.16	14	4.25			2	.61	.81	.25
Diarrhea and enteritis	2,507	33.73	5	.07	2	.03	38.74	.52	2,408	33.90	5	.07	2	.03	37.58	.53	99	30.05					1.15	.35
Intestinal parasites	387	5.21	1	.01			7.55	.10	385	5.42	1	.01			7.48	.11	2	.61					.06	.02
Tenia saginata	65	.87					1.08	.01	65	.92					1.08	.02								
Tenia solium	31	.42					.44	.01	31	.44					.44	.01								
Hymenolepsis nana	2	.03					.12	.002	2	.03					.12	.002								
Bothriocephalus latus	4	.05					.03	.0004	4	.06					.03	.0005								
Ascaris lumbricoides	19	.26					.77	.01	19	.27					.77	.01								
Oxyuris vermicularis	2	.03					.02	.0003	2	.03					.02	.0003								
Ankylostomum duodenale	136	1.83	1	.01			2.59	.03	135	1.90	1	.01			2.56	.04	1	.30					.03	.01
Necator Americanus	127	1.71					2.49	.03	126	1.77					2.45	.03	1	.30					.03	.01
Other intestinal parasites	1	.01					.01	.0001	1	.01					.01	.0001								
Inguinal and other hernia	268	3.61	32	.42			29.43	.40	253	3.56	32	.44			27.88	.39	15	4.55					1.55	.47
Hepatic abscess	22	.30	1	.01	7	.09	4.79	.06	19	.27	1	.01	7	.10	4.36	.06	3	.91					.43	.13
Appendicitis	347	4.67	7	.09	6	.08	33.58	.45	332	4.67	7	.10	5	.07	32.41	.46	15	4.55			1	.30	1.17	.35
Climatic bubo	7	.09					.63	.01	7	.10					.63	.01								
Tropical ulcer	23	.31					1.41	.02	23	.32					1.41	.02								
Jiggers (pulex penetrans)	10	.13					.24	.003	10	.14					.24	.003								
Pemphigus contagiosus	49	.66					1.55	.02	49	.69					1.55	.02								
Dhobie itch	212	2.85					4.63	.06	181	2.55					4.03	.06	31	9.41					.60	.18
Tenia imbricata	10	.13					.15	.002	10	.14					.15	.002								
Prickly heat	20	.27					.34	.005	20	.28					.34	.004								
Acute nephritis	28	.38			5	.07	3.65	.05	28	.39			5	.07	3.65	.05								
Chronic nephritis	45	.61	16	.21	7	.09	7.42	.10	43	.61	14	.19	7	.10	7.27	.10	2	.61	2	.61			.15	.04
Malingering	70	.94					1.97	.03	59	.83					1.43	.02	11	3.34					.54	.16

TABLE NO. 62.—*Admissions to sick report, discharges, deaths, and noneffectiveness, with ratios per 1,000 of mean strength, for the year 1909, United States Army*—Continued.

Causes of admission to sick report.	Army, total.								Army, white.								Army, colored.							
Mean strength	S. G. O., 74,319—A. G. O., 75,399.								S. G. O., 71,025—A. G. O., 72,105.								S. G. O., 3,294—A. G. O., 3,294.							
	Admissions.		Discharges.		Deaths.		Noneffective.		Admissions.		Discharges.		Deaths.		Noneffective.		Admissions.		Discharges.		Deaths.		Noneffective.	
	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.
External causes, special.																								
Fractures, exclusive of gunshot	804	10.82	32	0.42	24	0.32	99.33	1.34	788	11.09	32	0.44	22	0.31	97.55	1.38	16	4.86	.....	.....	2	0.61	1.78	0.54
Dislocations	219	2.95	2	.03	.....	.....	10.16	.14	210	2.96	2	.03	.....	.....	9.84	.14	9	2.73	.....	.....	.....	.....	.33	.10
Sprains and muscular strains	4,230	56.92	10	.13	.....	.....	89.29	1.20	4,054	57.08	9	.12	.....	.....	86.52	1.22	176	53.43	1	0.30	.....	.....	2.77	.84
Wounds, gunshot	215	2.89	18	.24	51	.68	24.63	.33	206	2.90	18	.25	51	.71	23.28	.33	9	2.73	.....	.....	.....	.....	1.35	.41
Wounds other than gunshot	3,218	43.30	18	.24	7	.09	79.01	1.06	3,103	43.69	18	.25	6	.08	75.95	1.07	115	34.91	.....	.....	1	.30	3.07	.94
Sunstroke	7	.09	1	.01	.....	.....	.36	.004	7	.10	1	.01	.....	.....	.36	.005	.....	.....	.....	.....	.....	.....	.....	.....
Frostbite and general freezing	85	1.14	3	.04	.....	.....	2.10	.03	76	1.07	2	.03	.....	.....	1.66	.02	9	2.73	1	.30	.....	.....	.44	.13
Drowning	.....	.....	.....	.....	28	.37	.....	.....	.....	.....	.....	.....	28	.39	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Poisoning, acute	315	4.24	.....	.....	11	.15	3.28	.04	309	4.35	.....	.....	9	.12	3.24	.05	6	1.82	.....	.....	2	.61	.05	.01
Venomous bites, etc	86	1.16	.....	.....	.....	.....	1.50	.02	81	1.14	.....	.....	.....	.....	1.43	.02	5	1.52	.....	.....	.....	.....	.07	.02
Snake bite	2	.03	.....	.....	.....	.....	.09	.001	2	.03	.....	.....	.....	.....	.09	.001	.....	.....	.....	.....	.....	.....	.....	.....
Other venomous bites, etc	84	1.13	.....	.....	.....	.....	1.41	.02	79	1.11	.....	.....	.....	.....	1.34	.02	5	1.52	.....	.....	.....	.....	.07	.02
Diseases and injuries grouped.																								
General diseases	28,396	382.08	476	6.31	121	1.60	1,612.09	21.69	27,145	382.19	445	6.17	114	1.58	1,533.88	21.60	1,251	379.78	31	9.41	7	2.13	78.21	23.74
Infectious diseases	10,387	139.76	11	.15	60	.80	327.97	4.41	10,139	142.75	11	.15	58	.80	319.96	4.50	248	75.29	.....	.....	2	.61	8.01	2.43
Other general diseases	18,009	242.32	465	6.17	61	.81	1,284.12	17.28	17,006	239.44	434	6.02	56	.78	1,213.92	17.09	1,003	304.49	31	9.41	5	1.52	70.21	21.31
Diseases of the nervous system and organs of special sense	2,955	39.76	280	3.71	10	.13	153.34	2.06	2,834	39.90	270	3.74	10	.14	146.20	2.06	121	36.74	10	3.04	.....	.....	7.14	2.17
Of the nervous system	1,253	16.86	220	2.92	10	.13	84.16	1.13	1,186	16.70	210	2.91	10	.14	79.42	1.12	67	20.34	10	3.04	.....	.....	4.73	1.44
Of the eye and its adnexa	1,121	15.08	32	.42	.....	.....	39.96	.54	1,082	15.23	32	.44	.....	.....	37.95	.53	39	11.84	.....	.....	.....	.....	2.01	.61
Of the ear and its adnexa	581	7.82	28	.37	.....	.....	29.22	.39	566	7.97	28	.39	.....	.....	28.83	.41	15	4.55	.....	.....	.....	.....	.39	.12
Diseases of the circulatory system	1,681	22.62	112	1.49	33	.44	103.01	1.39	1,605	22.60	108	1.50	26	.36	97.46	1.37	76	23.07	4	1.21	7	2.13	5.55	1.69
Diseases of the respiratory system	5,209	70.09	33	.44	29	.38	115.44	1.55	4,976	70.06	33	.46	26	.36	109.79	1.55	233	70.73	.....	.....	3	.91	5.65	1.72
Diseases of the digestive system	14,812	199.30	72	.95	22	.29	317.80	4.28	14,292	201.22	70	.97	21	.29	307.05	4.32	520	157.86	2	.61	1	.30	10.75	3.26

Diseases of the genito-urinary system	1,050	14.13	51	.68	12	.16	49.63	.67	1,025	14.43	48	.67	12	.17	48.05	.68	25	7.59	3	.91	....	....	1.58	.48
Diseases of the skin and cellular tissue	6,512	87.62	9	.12	....	....	170.09	2.29	6,305	88.77	9	.12	....	....	164.65	2.32	207	62.84	....	....	....	....	5.44	1.65
Diseases of the organs of locomotion	2,308	31.06	41	.54	....	....	80.42	1.08	2,191	30.85	39	.54	....	....	77.77	1.10	117	35.52	2	.61	....	....	2.65	.80
Malformations, etc	130	1.75	71	.94	....	....	12.84	.17	127	1.79	70	.97	....	....	12.10	.17	3	.91	1	.30	....	....	.74	.22
Diseases, results of old age	1	.01	....	....	....	....	.02	.0002	1	.01	....	....	....	....	.02	.0002	....	....	....	....	....	....	....	....
Ill-defined diseases	1,300	17.49	1	.01	1	.01	32.81	.44	1,238	17.43	1	.01	1	.01	31.04	.44	62	18.82	....	....	....	....	1.77	.54
Total for diseases	64,354	865.92	1,146	15.20	228	3.02	2,647.49	35.62	61,739	869.26	1,093	15.16	210	2.91	2,528.01	35.59	2,615	793.87	53	16.09	18	5.46	119.48	36.27
External causes	14,646	197.07	124	1.64	142	1.88	435.61	5.86	14,085	198.31	120	1.66	136	1.89	420.23	5.92	561	170.31	4	1.21	6	1.82	15.38	4.67
Total for diseases and external causes	79,000	1,062.99	1,270	16.84	370	4.91	3,083.10	41.48	75,824	1,067.57	1,213	16.82	346	4.80	2,948.24	41.51	3,176	964.18	57	17.30	24	7.29	134.86	40.94

TABLE NO. 63.—*Admissions to sick report, discharges, deaths, and noneffectiveness, with ratios per 1,000 of mean strength, for the year 1909, United States, continental (excluding Alaska).*

Causes of admission to sick report.	United States, continental (excluding Alaska), total.										United States, continental (excluding Alaska), white.										United States, continental (excluding Alaska), colored.									
Mean strength	S. G. O., 57,124—A. G. O., 57,274.										S. G. O., 55,163—A. G. O., 55,347.										S. G. O., 1,961—A. G. O., 1,927.									
	Admissions.		Discharges.			Deaths.			Noneffective.		Admissions.		Discharges.			Deaths.			Noneffective.		Admissions.		Discharges.			Deaths.			Noneffective.	
	Number.	Ratio.	Number.[a]	Number.[b]	Ratio.[b]	Number.[a]	Number.[b]	Ratio.[b]	Number.	Ratio.	Number.	Ratio.	Number.[a]	Number.[b]	Ratio.[b]	Number.[a]	Number.[b]	Ratio.[b]	Number.	Ratio.	Number.	Ratio.	Number.[a]	Number.[b]	Ratio.[b]	Number.[a]	Number.[b]	Ratio.[b]	Number.	Ratio.
Typhoid fever (including paratyphoid fever)	173	3.03				16	16	0.28	33.32	0.58	171	3.10				15	15	0.27	32.81	0.59	2	1.02				1	1	0.52	0.50	0.26
Fevers, undetermined	123	2.15							2.23	.04	122	2.21							2.21	.04	1	.51							.01	.01
Malarial fevers	1,317	23.06	1	1	0.02				29.38	.51	1,300	23.57	1	1	0.02				29.07	.53	17	8.67							.31	.16
Intermittent	1,159	20.29							23.25	.41	1,144	20.74							22.99	.42	15	7.65							.26	.13
Aestivo-autumnal	112	1.96							4.04	.07	110	1.99							3.99	.07	2	1.02							.05	.03
Malarial cachexia and undetermined infection	46	.80	1	1	.02				2.09	.04	46	.83	1	1	.02				2.09	.04										
Smallpox	2	.04							.23	.004	1	.02							.22	.004	1	.51							.01	.01
Measles	574	10.05				8	8	.14	35.85	.63	574	10.41				8	8	.14	35.85	.65										
Scarlet fever	23	.40				1	1	.02	1.90	.03	22	.40				1	1	.02	1.75	.03	1	.51							.15	.08
Diphtheria	35	.61				3	3	.05	1.90	.03	35	.63				3	3	.05	1.85	.03									.05	.03
Influenza	1,992	34.87				1	1	.02	31.53	.55	1,984	35.97				1	1	.02	31.37	.57	8	4.08							.16	.08
Cholera nostras	1	.02							.01	.0001	1	.02							.01	.0001										
Dysentery	110	1.93	5	5	.09				13.75	.24	105	1.90	5	5	.09				12.78	.23	5	2.55							.96	.49
Amebic	77	1.35	5	5	.09				11.69	.20	72	1.31	5	5	.09				10.72	.19	5	2.55							.96	.49
Bacillary	4	.07							.73	.01	4	.07							.73	.01										
Mixed infections and other dysenteries	29	.51							1.33	.02	29	.53							1.33	.02										
Leprosy			1	1	.02	1	1	.02	1.58	.03			1	1	.02	1	1	.02	1.58	.03										
Beriberi									.01	.0002									.01	.0002										
Erysipelas	30	.53	1			2	2	.03	1.61	.03	30	.54	1			2	2	.04	1.61	.03										
Dengue	4	.07							.05	.001	4	.07							.05	.001										
Mumps	692	12.11							29.30	.51	692	12.54							29.29	.53									.01	.01
Cerebrospinal meningitis, epidemic	13	.23	2	2	.03	7	7	.12	1.56	.03	13	.24	2	2	.04	7	7	.13	1.56	.03										
Yaws (frambesia)	1	.02							.42	.01									.06	.001	1	.51							.36	.18
Vaccinia	1,088	19.05							16.65	.29	1,077	19.52							16.48	.30	11	5.61							.17	.09
Purulent infection and septicemia	6	.11	1	1	.02	2	2	.03	.86	.02	6	.11	1	1	.02	2	2	.04	.86	.02										
Trichinosis	1	.02							.28	.005	1	.02							.28	.005										

Tuberculosis (all)	271	4.74	169	120	2.10	40	37	.65	190.00	3.33	262	4.75	156	113	2.04	36	35	.63	178.11	3.23	9	4.59	13	7	3.63	4	2	1.04	11.90	6.07
Tuberculosis, pulmonary	226	3.96	158	111	1.94	33	30	.52	179.88	3.15	221	4.01	145	104	1.88	30	29	.52	168.65	3.06	5	2.55	13	7	3.63	3	1	.52	11.22	5.72
Tuberculosis of other organs	45	.79	11	9	.16	7	7	.12	10.14	.18	41	.75	11	9	.16	6	6	.11	9.46	.17	4	2.04				1	1	.52	.68	.35
Venereal diseases (all)	10,137	177.46	205	188	3.28				653.44	11.44	9,711	176.04	169	174	3.14				628.36	11.39	426	217.24	16	14	7.27				25.08	12.79
Syphilis and its results	1,534	26.85	121	110	1.92				152.99	2.68	1,460	26.47	109	100	1.81				145.67	2.64	74	37.74	12	10	5.19				7.33	3.74
Chancroid and its results	1,447	25.33							87.82	1.54	1,384	25.09							83.84	1.52	63	32.13							3.98	2.03
Gonorrhea and its results	7,156	125.27	84	78	1.36				412.61	7.22	6,867	124.49	80	74	1.34				398.85	7.23	289	147.37	4	4	2.08				13.77	7.02
Cancer and other malignant growths	9	.16	4	3	.05	1	1	.02	1.25	.02	9	.17	4	3	.05	1	1	.02	1.25	.02										
Rheumatism, articular (all)	834	14.60	26	25	.44	1	1	.02	58.00	1.02	818	14.83	26	25	.45	1	1	.02	56.73	1.03	16	8.16							1.27	.65
Rheumatic fever	491	8.60	2	2	.03	1	1	.02	30.25	.53	480	8.70	2	2	.04	1	1	.02	29.41	.53	11	5.61							.84	.43
Rheumatism, subacute and chronic, articular	343	6.00	24	23	.40				27.75	.49	338	6.13	24	23	.42				27.32	.50	5	2.55							.43	.22
Alcoholism and its results	1,427	24.98	20	19	.33	7	7	.12	18.62	.33	1,418	25.71	20	19	.34	7	7	.13	18.46	.33	9	4.59							.15	.08
Insanity	93	1.63	107	79	1.38	1	1	.02	16.66	.29	89	1.62	99	76	1.38	1	1	.02	15.15	.27	4	2.04	8	3	1.56				1.51	.77
Epilepsy	110	1.93	58	51	.89				8.73	.15	110	1.99	58	51	.92				8.73	.16										
Trachoma	22	.39	4	3	.05				2.27	.04	22	.40	4	3	.05				2.27	.04										
Organic disease of the heart	157	2.75	69	60	1.05	19	18	.31	20.13	.35	146	2.65	66	59	1.07	14	14	.25	17.90	.33	11	5.61	3	1	.52	5	4	2.08	2.23	1.14
Aneurism	5	.09	6	3	.05	3	3	.05	1.98	.03	5	.09	6	3	.05	3	3	.05	1.74	.03									.24	.12
Filariasis	1	.02							.12	.002									.08	.001	1	.51							.03	.02
Chyluria									.08	.001									.08	.001										
Other filariasis	1	.02							.03	.001											1	.51							.03	.02
Functional diseases of the heart	130	2.28	23	18	.31				8.36	.15	129	2.34	23	18	.33				8.35	.15	1	.51							.01	.004
Bronchitis, acute and chronic	2,088	36.55	3	3	.05				39.91	.70	2,039	36.96	3	3	.05				38.92	.71	49	24.99							.99	.51
Broncho-pneumonia	16	.28				3	3	.05	1.77	.03	16	.29				3	3	.05	1.60	.03									.17	.09
Pneumonia (pneumonic fever)	126	2.21				21	20	.35	9.51	.17	115	2.08				19	18	.33	8.88	.16	11	5.61				2	2	1.04	.62	.32
Diarrhea and enteritis	1,603	28.06	5	5	.09	1	1	.02	21.45	.38	1,570	28.46	5	5	.09	1	1	.02	20.99	.38	33	16.83							.46	.23
Intestinal parasites	321	5.62	1	1	.02				5.85	.10	319	5.78	1	1	.02				5.79	.10	2	1.02							.06	.03
Tenia saginata	55	.96							.99	.02	55	1.00							.99	.02										
Tenia solium	30	.53							.41	.01	30	.54							.41	.01										
Hymenolepsis nana	2	.04							.12	.002	2	.04							.12	.002										
Bothriocephalus latus	4	.07							.03	.001	4	.07							.03	.001										
Ascaris lumbricoides	6	.11							.09	.002	6	.11							.09	.002										
Oxyuris vermicularis	1	.02							.002	.00005	1	.02							.002	.00005										
Ankylostomum duodenale	99	1.73	1	1	.02				1.83	.03	98	1.78	1	1	.02				1.80	.03	1	.51							.03	.02
Necator Americanus	124	2.17							2.38	.04	123	2.23							2.35	.04	1	.51							.03	.02

[a] Including those occurring in the United States proper of cases from commands on duty in Alaska or insular possessions.
[b] Excluding those occurring in the United States proper of cases from commands on duty in Alaska or insular possessions.

TABLE NO. 63.—*Admissions to sick report, discharges, deaths, and noneffectiveness, with ratios per 1,000 of mean strength, for the year 1909, United States, continental (excluding Alaska)*—Continued.

	United States, continental (excluding Alaska), total.										United States, continental (excluding Alaska), white.										United States, continental (excluding Alaska), colored.									
Mean strength	S. G. O., 57,124—A. G. O., 57,274.										S. G. O., 55,163—A. G. O., 55,347.										S. G. O., 1,961—A. G. O., 1,927.									
	Admissions.		Discharges.			Deaths.			Noneffective.		Admissions.		Discharges.			Deaths.			Noneffective.		Admissions.		Discharges.			Deaths.			Noneffective.	
Causes of admission to sick report.	Number.	Ratio.	Number.[a]	Number.[b]	Ratio.[b]	Number.[a]	Number.[b]	Ratio.[b]	Number.	Ratio.	Number.	Ratio.	Number.[a]	Number.[b]	Ratio.[b]	Number.[a]	Number.[b]	Ratio.[b]	Number.	Ratio.	Number.	Ratio.	Number.[a]	Number.[b]	Ratio.[b]	Number.[a]	Number.[b]	Ratio.[b]	Number.	Ratio.
Inguinal and other hernia	212	3.71	32	30	0.52				22.14	0.39	203	3.68	32	30	0.54				21.32	0.39	9	4.59							0.82	0.42
Hepatic abscess	14	.25	1	1	.02	5	4	0.07	3.27	.06	11	.20	1	1	.02	5	4	0.07	2.83	.05	3	1.53							.43	.22
Appendicitis	233	4.08	7	7	.12	2	2	.03	22.16	.39	221	4.01	7	7	.13	2	2	.04	21.16	.38	12	6.12							1.00	.51
Tropical ulcer	8	.14							.41	.01	8	.15							.41	.01										
Jiggers (pulex penetrans)	10	.18							.24	.004	10	.18							.24	.004										
Pemphigus contagiosus	9	.16							.39	.01	9	.16							.39	.01										
Dhobie itch	28	.49							.69	.01	28	.51							.67	.01									.02	.01
Tenia imbricata	9	.16							.12	.002	9	.16							.12	.002										
Prickly heat	9	.16							.09	.002	9	.16							.09	.002										
Acute nephritis	25	.44				4	4	.07	3.56	.06	25	.45				4	4	.07	3.56	.06										
Chronic nephritis	40	.70	16	15	.26	7	7	.12	6.55	.11	38	.69	14	13	.23	7	7	.13	6.40	.12	2	1.02	2	2	1.04				.15	.08
Malingering	61	1.07							1.53	.03	51	.92							1.17	.02	10	5.10							.36	.18
External causes, special.																														
Fractures, exclusive of gunshot	639	11.19	31	26	.45	20	20	.35	82.10	1.44	632	11.46	31	26	.47	19	19	.34	81.56	1.48	7	3.57				1	1	0.52	.54	.27
Dislocations	180	3.15	2	2	.03				8.24	.14	174	3.15	2	2	.04				8.07	.15	6	3.06							.16	.08
Sprains and muscular strains	3,487	61.04	10	9	.16				75.09	1.32	3,367	61.04	9	8	.14				73.04	1.32	120	61.19	1	1	.52				2.05	1.05
Wounds, gunshot	169	2.96	18	16	.28	35	35	.61	18.71	.33	162	2.94	18	16	.29	35	35	.63	17.73	.32	7	3.57							.98	.50
Wounds other than gunshot	2,513	43.99	18	15	.26	3	3	.05	60.46	1.06	2,459	44.57	18	15	.27	3	3	.05	58.87	1.07	54	27.54							1.59	.81
Sunstroke	4	.07	1	1	.02				.34	.01	4	.07	1	1	.02				.34	.01										
Frostbite and general freezing	80	1.40	3	2	.03				1.83	.03	71	1.29	2	1	.02				1.39	.03	9	4.59	1	1	.52				.44	.22
Drowning						23	23	.40								23	23	.42												
Poisoning, acute	158	2.77				11	11	.19	1.48	.03	154	2.79				9	9	.16	1.45	.03	4	2.04				2	1	1.04	.04	.02

Venomous bites, etc	44	.78							.74	.01	44	.80							.74	.01												
Snake bite	2	.04							.08	.002	2	.04							.08	.002												
Other venemous bites, etc	42	.74							.65	.01	42	.76							.65	.01												
Diseases and injuries grouped.																																
General diseases	19,291	337.70	470	396	6.91	92	89	1.55	1,141.05	19.97	18,780	340.45	439	373	6.74	87	86	1.55	1,098.71	19.92	511	260.58	31	23	11.94	5	3	1.56	42.34	21.59			
Infectious diseases	6,399	112.02	10	9	.16	39	39	.68	203.91	3.57	6,350	115.11	10	9	.16	38	38	.69	201.11	3.65	49	24.99				1	1	.52	2.80	1.43			
Other general diseases	12,892	225.68	460	387	6.76	53	50	.87	937.14	16.40	12,430	225.33	429	364	6.58	49	48	.87	897.60	16.27	462	235.59	31	23	11.94	4	2	1.04	39.54	20.16			
Diseases of the nervous system and organs of special sense	2,242	39.25	278	229	4.00	7	7	.12	115.05	2.01	2,198	39.84	268	226	4.08	7	7	.13	110.76	2.01	44	22.44	10	3	1.56				4.29	2.19			
Of the nervous system	949	16.61	218	176	3.07	7	7	.12	63.67	1.11	926	16.79	208	173	3.13	7	7	.13	60.40	1.09	23	11.73	10	3	1.56				3.28	1.67			
Of the eye and its adnexa	881	15.42	32	30	.52				29.53	.52	864	15.66	32	30	.54				28.68	.52	17	8.67							.85	.43			
Of the ear and its adnexa	412	7.21	28	23	.40				21.85	.38	408	7.40	28	23	.42				21.68	.39	4	2.04							.17	.09			
Diseases of the circulatory system	1,200	21.01	112	94	1.64	25	24	.42	73.98	1.30	1,157	20.97	108	92	1.66	20	20	.36	70.36	1.28	43	21.93	4	2	1.04	5	4	2.08	3.62	1.85			
Diseases of the respiratory system	4,396	76.96	33	29	.51	28	27	.47	94.72	1.66	4,269	77.39	33	29	.52	25	24	.43	90.82	1.65	127	64.76				3	3	1.56	3.90	1.99			
Diseases of the digestive system	11,520	201.67	71	64	1.12	14	12	.21	234.55	4.11	11,304	204.92	69	64	1.16	14	12	.22	228.96	4.15	216	110.15	2						5.59	2.85			
Diseases of the genito-urinary system	819	14.34	51	48	.84	11	11	.19	40.37	.71	806	14.61	48	46	.83	11	11	.20	39.26	.71	13	6.63	3	2	1.04				1.11	.56			
Diseases of the skin and cellular tissue	4,713	82.51	9	9	.16				119.67	2.09	4,616	83.68	9	9	.16				117.35	2.13	97	49.46							2.33	1.19			
Diseases of the organs of locomotion	1,859	32.54	41	39	.68				64.39	1.13	1,796	32.56	39	37	.67				62.64	1.14	63	32.13	2	2	1.04				1.75	.89			
Malformations, etc	115	2.01	71	65	1.13				11.16	.20	113	2.05	70	64	1.16				10.76	.20	2	1.02	1	1	.52				.40	.21			
Diseases, results of old age	1	.02							.02	.0003	1	.02							.02	.0003												
Ill-defined diseases	787	13.78	1	1	.02	1			22.64	.40	756	13.70	1	1	.02	1			21.92	.40	31	15.81							.72	.37			
Total for diseases	46,943	821.77	1,137	974	17.01	178	170	2.97	1,917.61	33.57	45,796	830.19	1,084	941	17.00	165	160	2.89	1,851.56	33.56	1,147	584.91	53	33	17.13	13	10	5.19	66.04	33.68			
External causes	11,573	202.59	123	107	1.87	107	107	1.87	350.13	6.13	11,235	203.67	119	103	1.86	104	104	1.88	340.64	6.18	338	172.36	4	4	2.08	3	3	1.56	9.49	4.84			
Total for diseases and external causes	58,516	1,024.37	1,260	1,081	18.88	285	277	4.84	2,267.73	39.70	57,031	1,033.86	1,203	1,044	18.86	269	264	4.77	2,192.21	39.74	1,485	757.27	57	37	19.20	16	13	6.75	75.53	38.52			
Subclassification (repeated above):																																
Suicide						28										27										1							
Homicide						12										12																	

a Including those occurring in the United States proper of cases from commands on duty in Alaska or insular possessions.
b Excluding those occurring in the United States proper of cases from commands on duty in Alaska or insular possessions.

TABLE NO. 64.—*Admissions to sick report, discharges, deaths, and noneffectiveness, with ratios per 1,000 of mean strength, for the year 1909, Alaska, Cuba, and Hawaii.*

Causes of admission to sick report.	Alaska.									Cuba.									Hawaii.								
Mean strength	S. G. O., 1,064—A. G. O., 1,146.									S. G. O., 604—A. G. O., 604.									S.G. O., 1,014—A. G. O., 1,087.								
	Admissions.		Discharges.			Deaths.			Noneffective.	Admissions.		Discharges.			Deaths.			Noneffective.	Admissions.		Discharges.			Deaths.			Noneffective.	
	Number.	Ratio.	Number.[a]	Number.[b]	Ratio.[b]	Number.[a]	Number.[b]	Ratio.[b]	Number.	Ratio.	Number	Ratio.	Number.[a]	Number.[b]	Ratio.[b]	Number.[a]	Number.[b]	Ratio.[b]	Number.	Ratio.	Number.	Ratio.	Number.[a]	Number.[b]	Ratio.[b]	Number.[a]	Number.[b]	Ratio.[b]	Number.	Ratio.
Typhoid fever (including paratyphoid fever)																			0.03	0.05	10	9.86				1	1	0.92	2.05	2.02
Fevers, undetermined	1	0.94							0.14	0.13	4	6.62							.05	.08	4	3.94							.05	.05
Malarial fevers	1	.94							.02	.02	16	26.49							.41	.68	5	4.93							.15	.15
Intermittent	1	.94							.02	.02	3	4.97							.07	.11	3	2.96							.13	.13
Aestivo-autumnal											13	21.52							.35	.57	1	.99							.02	.02
Malarial cachexia and undetermined infection																					1	.99							.003	.003
Influenza	4	3.76							.15	.14																				
Dysentery	1	.94							.54	.51									.02	.03	2	1.97							.08	.08
Amebic	1	.94							.54	.51									.02	.03										
Bacillary																													.02	.02
Mixed infections and other dysenteries																					2	1.97							.05	.05
Dengue																			.02	.04	9	8.88							.13	.13
Mumps	1	.94							.02	.02	1	1.66							.03	.05	6	5.92							.30	.29
Vaccinia											36	59.60							.41	.67	2	1.97							.02	.02
Tuberculosis (all)	5	4.70							.46	.43	1	1.66		6	9.93				.14	.24	3	2.96		1	0.92				.22	.22
Tuberculosis, pulmonary	5	4.70							.46	.43				5	8.28						2	1.97		1	.92				.10	.09
Tuberculosis of other organs											1	1.66		1	1.66				.14	.24	1	.99							.13	.13
Venereal diseases (all)	57	53.57							4.52	4.25	123	203.64		2	3.31				6.84	11.32	229	225.84	1	4	3.68				23.55	23.23
Syphilis and its results	7	6.58							1.05	.99	14	23.18		2	3.31				1.96	3.24	60	59.17	1	3	2.76				5.99	5.91
Chancroid and its results	7	6.58							.28	.26	27	44.70							2.25	3.72	26	25.64							1.43	1.41
Gonorrhea and its results	43	40.41							3.19	3.00	82	135.76							2.64	4.36	143	141.03		1	.92				16.13	15.91
Rheumatism, articular (all)	14	13.16							.78	.73	4	6.62							.17	.28	8	7.89							.35	.34
Rheumatic fever	6	5.64							.30	.28	4	6.62							.17	.28										
Rheumatism, subacute and chronic, articular	8	7.52							.48	.45											8	7.89							.35	.34
Alcoholism and its results	21	19.74	1	1	0.87				.20	.19	7	11.59		1	1.66				.10	.17	21	20.71	1	1	.92				.18	.18
Insanity	1	.94							.12	.12	2	3.31	2	2	3.31				.07	.12	1	.99		2	1.84				.12	.11

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TABLE No. 64.—*Admissions to sick report, discharges, deaths, and noneffectiveness, with ratios per 1,000 of mean strength, for the year 1909, Alaska, Cuba, and Hawaii*—Continued.

Causes of admission to sick report.	Alaska.									Cuba.								Hawaii.								
Mean strength	S. G. O., 1,064—A. G. O., 1,146.									S. G. O., 604—A. G. O., 604.								S. G. O., 1,014—A. G. O., 1,087.								
	Admissions.		Discharges.			Deaths.			Noneffective.	Admissions.		Discharges.			Deaths.			Noneffective.	Admissions.		Discharges.			Deaths.			Noneffective.	
	Number.	Ratio.	Number.[a]	Number.[b]	Ratio.[b]	Number.[a]	Number.[b]	Ratio.[b]	Number.	Ratio.	Number.	Ratio.	Number.[a]	Number.[b]	Ratio.[b]	Number.[a]	Number.[b]	Ratio.[b]	Number.	Ratio.	Number.	Ratio.	Number.[a]	Number.[b]	Ratio.[b]	Number.[a]	Number.[b]	Ratio.[b]	Number.	Ratio.
Diseases of the skin and cellular tissue	21	19.74							0.54	0.51	52	86.09							1.65	2.74	159	156.80							4.62	4.56
Diseases of the organs of locomotion	27	25.38							.62	.58	13	21.52							.21	.35	35	34.52							1.42	1.40
Malformations, etc											2	3.31		2	3.31				.17	.28	4	3.94		1	0.92				.24	.24
Ill-defined diseases	6	5.64							.18	.17	8	13.25							.28	.46	10	9.86							.12	.11
Total for diseases	300	281.95	1	1	0.87				12.80	12.03	406	672.19	2	18	29.80	1	1	1.66	15.50	25.67	851	839.25	2	14	12.88	1	1	0.92	44.88	44.26
External causes	115	108.08		4	3.49	2	2	1.75	4.46	4.19	76	125.83							2.37	3.92	346	341.22	1	1	.92	1	1	.92	8.41	8.30
Total for diseases and external causes	415	390.04	1	5	4.36	2	2	1.75	17.26	16.22	482	798.01	2	18	29.80	1	1	1.66	17.87	29.59	1,197	1,180.47	3	15	13.80	2	2	1.84	53.29	52.56

[a] Number of discharges and deaths which actually occurred.
[b] Number of discharges and deaths including those of cases invalided home and deducted from the United States and transports.

TABLE NO. 65.—*Admissions to sick report, discharges, deaths, and noneffectiveness, with ratios per 1,000 of mean strength, for the year 1909—American troops serving in the Philippine Islands.*

	Philippine Islands, total.								Philippine Islands, white.								Philippine Islands, colored.							
Mean strength	S. G. O., 12,844—A. G. O., 13,214.								S. G. O., 11,685—A. G. O., 12,055.								S. G. O., 1,159—A. G. O., 1,159.							
	Admissions.		Discharges.			Deaths.		Noneffective.	Admissions.		Discharges.			Deaths.		Noneffective.	Admissions.		Discharges.			Deaths.		Noneffective.	
Causes of admission to sick report.	Number.	Ratio.	Number.[a]	Number.[b]	Ratio.[b]	Number.[a]	Number.[b]	Ratio.[b]	Number.	Ratio.	Number.[a]	Number.[b]	Ratio.[b]	Number.[a]	Number.[b]	Ratio.[b]	Number.	Ratio.	Number.[a]	Number.[b]	Ratio.[b]	Number.[a]	Number.[b]	Ratio.[b]	Number.	Ratio.
Typhoid fever (including paratyphoid fever)	79	6.15				2	2	0.15	12.15	0.95	77	6.59				2	2	0.17	11.91	1.02	2	1.73							0.23	0.20
Fevers, undetermined	327	25.46							4.57	.36	311	26.62							4.35	.37	16	13.81							.22	.19
Malarial fevers	1,443	112.35				2	2	.15	31.10	2.42	1,345	115.10				2	2	.17	29.44	2.52	98	84.56							1.66	1.43
Intermittent	971	75.60							18.69	1.46	886	75.82							17.26	1.48	85	73.34							1.43	1.23
Aestivo autumnal	425	33.09				2	2	.15	10.41	.81	418	35.77				2	2	.17	10.26	.88	7	6.04							.15	.13
Malarial cachexia, and undetermined infection	47	3.66							1.99	.15	41	3.51							1.92	.17	6	5.18							.08	.07
Measles	2	.16							.16	.01	2	.17							.16	.01										
Influenza	12	.93							.29	.02	12	1.03							.29	.02										
Cholera nostras	1	.08							.01	.001	1	.09							.01	.001										
Dysentery	553	43.06				14	14	1.06	38.43	2.99	520	44.50				13	13	1.08	36.65	3.14	33	28.47				1	1	0.86	1.78	1.54
Amebic	238	18.53				3	3	.23	19.47	1.52	217	18.57				2	2	.17	18.04	1.54	21	18.12				1	1	.86	1.43	1.23
Bacillary	150	11.68				6	6	.45	10.93	.85	145	12.41				6	6	.50	10.81	.93	5	4.31							.12	.10
Mixed infections and other dysenteries	165	12.85				5	5	.38	8.03	.63	158	13.52				5	5	.41	7.79	.67	7	6.04							.24	.21
Leprosy	1	.08	1	1	0.08				.55	.04	1	.09	1	1	0.08				.55	.05										
Beriberi	2	.16							.22	.02	2	.17							.22	.02										
Erysipelas	1	.08		1	.08				.03	.003	1	.09		1	.08				.03	.003										
Dengue	1,672	130.18				1	1	.08	29.50	2.30	1,614	138.13				1	1	.08	28.49	2.44	58	50.04							1.01	.87
Mumps	13	1.01							.50	.04	13	1.11							.50	.04										
Vaccinia	1	.08							.01	.001	1	.09							.01	.001										
Purulent infection and septicemia	5	.39				3	3	.23	.19	.01	5	.43				3	3	.25	.19	.02										
Tuberculosis (all)	65	5.06	2	44	3.33	2	6	.45	5.41	.42	58	4.96	2	38	3.15	1	3	.25	4.75	.41	7	6.04		6	5.18	1	3	2.59	.66	.57
Tuberculosis, pulmonary	60	4.67	2	43	3.25	1	5	.38	5.10	.40	55	4.71	2	37	3.07	1	3	.25	4.56	.40	5	4.31		6	5.18		2	1.73	.55	.47
Tuberculosis of other organs	5	.39		1	.08	1	1	.08	.31	.02	3	.26		1	.08				.19	.02	2	1.73				1	1	.86	.12	.10
Venereal diseases (all)	3,877	301.85		12	.91				271.67	21.15	3,392	290.29		10	.83				244.33	20.91	485	418.46		2	1.73				27.34	23.59
Syphilis and its results	592	46.09		7	.53				59.78	4.65	565	48.35		5	.41				57.96	4.96	27	23.30		2	1.73				1.82	1.57
Chancroid and its results	733	57.07							41.29	3.21	635	54.34							35.38	3.03	98	84.56							5.91	5.10
Gonorrhea and its results	2,552	198.69		5	.38				170.61	13.28	2,192	187.59		5	.41				151.00	12.92	360	310.61							19.61	16.92

[a] Number of discharges and deaths which actually occurred in the Philippines Division.
[b] Number of discharges and deaths charged to the Philippines Division, including those of cases invalided home and deducted from the United States and transports.

TABLE NO. 65.—*Admissions to sick report, discharges, deaths, and noneffectiveness, with ratios per 1,000 of mean strength, for the year 1909—American troops serving in the Philippine Islands*—Continued.

Causes of admission to sick report.	Philippine Islands, total.								Philippine Islands, white.								Philippine Islands, colored.							
Mean strength	S. G. O., 12,844—A. G. O., 13,214.								S. G. O., 11,685—A. G. O., 12,055.								S. G. O., 1,159—A. G. O., 1,159.							
	Admissions.		Discharges.		Deaths.		Noneffective.		Admissions.		Discharges.		Deaths.		Noneffective.		Admissions.		Discharges.		Deaths.		Noneffective.	
	Number.	Ratio.	Number.[a]	Number.[b]	Ratio.[b]	Number.[a]	Number.[b]	Ratio.[b]	Number.	Ratio.	Number.[a]	Number.[b]	Ratio.[b]	Number.[a]	Number.[b]	Ratio.[b]	Number.	Ratio.	Number.[a]	Number.[b]	Ratio.[b]	Number.[a]	Number.[b]	Ratio.[b]	Number.	Ratio.
Cancer and other malignant growths	1	0.08	..	1	0.08	1	1	0.08	0.36	0.03	1	0.09	..	1	0.08	1	1	0.08	0.27	0.02									0.09	0.08
Rheumatism, articular (all)	98	7.63	..	1	.08	..	..	..	7.95	.62	80	6.85	..	1	.08	..	..	..	7.26	.62	18	15.53	..	..	..	..	..	..	.69	.60
Rheumatic fever	52	4.05	..	..	..	..	..	..	3.41	.27	39	3.34	..	..	..	..	..	..	2.93	.25	13	11.22	..	..	..	..	..	..	.48	.41
Rheumatism, subacute and chronic, articular	46	3.58	..	1	.08	..	..	..	4.42	.35	41	3.51	..	1	.08	..	..	..	4.21	.37	5	4.31	..	..	..	..	..	..	.21	.18
Alcoholism, and its results	285	22.19	..	..	..	..	..	..	3.92	.31	275	23.53	..	1	.08	..	..	..	3.77	.32	10	8.63	..	..	..	..	..	..	.15	.13
Insanity	20	1.56	..	26	1.97	..	..	..	2.19	.17	18	1.54	..	21	1.74	..	..	..	1.98	.17	2	1.73	..	5	4.31	..	..	..	.21	.18
Epilepsy	16	1.25	..	7	.53	..	..	..	1.07	.08	16	1.37	..	7	.58	..	..	..	1.07	.09										
Trachoma	2	.16	..	1	.08	..	..	..	.61	.05	2	.17	..	1	.08	..	..	..	.61	.05										
Organic disease of the heart	23	1.79	..	8	.61	7	8	.61	2.67	.21	19	1.63	..	6	.50	6	6	.50	2.22	.19	4	3.45	..	2	1.73	1	2	1.73	.45	.39
Aneurism	3	.23	..	3	.23	..	..	..	.37	.03	2	.17	..	3	.25	..	..	..	.36	.03	1	.86	..	..	..	..	..	..	.01	.01
Filariasis	1	.08	..	..	..	..	..	..	.09	.01	1	.09	..	..	..	..	..	..	.09	.01										
Chyluria	1	.08	..	..	..	..	..	..	.09	.01	1	.09	..	..	..	..	..	..	.09	.01										
Functional diseases of the heart	39	3.04	..	4	.30	..	..	..	2.53	.20	39	3.34	..	4	.33	..	..	..	2.53	.22										
Bronchitis, acute and chronic	326	25.38	..	..	..	..	..	..	7.62	.59	286	24.47	..	..	..	..	..	..	7.18	.62	40	34.51	..	..	..	..	..	..	.44	.38
Broncho-pneumonia	2	.16	..	..	..	..	..	..	.07	.01	2	.17	..	..	..	..	..	..	.07	.01										
Pneumonia (pneumonic fever)	13	1.01	..	..	..	..	1	.08	1.63	.13	12	1.03	..	..	..	..	1	.08	1.53	.13	1	.86	..	..	..	..	..	..	.09	.08
Diarrhea and enteritis	768	59.79	..	..	..	1	1	.08	15.09	1.17	739	63.24	..	..	..	1	1	.08	14.71	1.26	29	25.02	..	..	..	..	..	..	.38	.32
Intestinal parasites	36	2.80	..	..	..	..	..	..	1.44	.11	36	3.08	..	..	..	..	..	..	1.44	.12										
Tenia saginata	7	.55	..	..	..	..	..	..	.07	.01	7	.60	..	..	..	..	..	..	.07	.01										
Ascaris lumbricoides	13	1.01	..	..	..	..	..	..	.68	.05	13	1.11	..	..	..	..	..	..	.68	.06										
Oxyuris vermicularis	1	.08	..	..	..	..	..	..	.02	.001	1	.09	..	..	..	..	..	..	.02	.001										
Ankylostomum duodenale	11	.86	..	..	..	..	..	..	.55	.04	11	.94	..	..	..	..	..	..	.55	.05										
Necator Americanus	3	.23	..	..	..	..	..	..		.01	3	.26	..	..	..	..	..	..		.01										
Other intestinal parasites	1	.08	..	..	..	..	..	..		.0004	1	.09	..	..	..	..	..	..		.0004										
Inguinal and other herniæ	45	3.50	..	2	.15	..	..	..	6.10	.48	40	3.42	..	2	.17	..	..	..	5.41	.46	5	4.31	..	..	..	..	..	..	.69	.60
Hepatic abscess	7	.55	..	..	..	2	3	.23	1.22	.10	7	.60	..	..	..	2	3	.25	1.22	.10										
Appendicitis	93	7.24	..	..	..	3	3	.23	9.61	.75	90	7.70	..	..	..	2	2	.17	9.44	.81	3	2.59	..	..	..	1	1	.86	.17	.14

Climatic bubo	7	.55							.63	.05	7	.60							.63	.05											
Tropical ulcer	11	.86							.80	.06	11	.94							.80	.07											
Pemphigus contagiosus	38	2.96							1.12	.09	38	3.25							1.12	.10											
Dhobie itch	174	13.55							3.61	.28	144	12.32							3.04	.26	30	25.89							.57	.49
Tenia imbricata	1	.08							.03	.002	1	.09							.03	.003											
Prickly heat	6	.47							.11	.01	6	.51							.11	.01											
Acute nephritis	3	.23			1	1	.08		.10	.01	3	.26				1	1	.08	.10	.01											
Chronic nephritis	4	.31							.45	.04	4	.34							.45	.04											
Malingering	9	.70							.42	.03	8	.68							.24	.02	1	.86							.18	.15
External causes, special.																															
Fractures, exclusive of gunshot	127	9.89	4	.30	3	3	.23		12.44	.97	120	10.27	4	.33	2	2	.17		11.27	.96	7	6.04			1	1	.86	1.18	1.01		
Dislocations	27	2.10							1.25	.10	24	2.05							1.09	.09	3	2.59						.16	.14		
Sprains and muscular strains	537	41.81	1	.08					10.59	.82	482	41.25	1	.08					9.93	.85	55	47.46						.66	.57		
Wounds, gunshot	42	3.27	1	.08	16	16	1.21		4.43	.34	40	3.42	1	.08	16	16	1.33		4.05	.35	2	1.73						.38	.32		
Wounds other than gunshot	568	44.22	2	.15	4	4	.30		14.81	1.15	510	43.65	2	.17	3	3	.25		13.38	1.15	58	50.04			1	1	.86	1.43	1.23		
Sunstroke	3	.23							.02	.001	3	.26							.02	.002											
Drowning					2	2	.15								2	2	.17														
Poisoning, acute	153	11.91							1.76	.14	151	12.92							1.75	.15	2	1.73						.01	.01		
Venomous bites	38	2.96							.72	.06	33	2.82							.65	.06	5	4.31						.07	.06		
Snake bites																															
Other venomous bites	38	2.96							.72	.06	33	2.82							.65	.06	5	4.31						.07	.06		
Diseases and injuries grouped.																															
General diseases	8,136	633.45	3	61	4.62	26	30	2.27	403.48	31.41	7,425	635.43	3	53	4.40	24	26	2.16	369.86	31.65	711	613.46		8	6.90	2	4	3.45	33.62	29.00		
Infectious diseases	3,781	294.38	1	2	.15	19	19	1.44	112.99	8.80	3,590	307.23	1	2	.17	18	18	1.49	108.30	9.27	191	164.80				1	1	.86	4.68	4.04		
Other general diseases	4,355	339.07	2	59	4.47	7	11	.83	290.49	22.62	3,835	328.20	2	51	4.23	6	8	.66	261.56	22.38	520	448.66		8	6.90	1	3	2.59	28.93	24.96		
Diseases of the nervous system and organs of special sense	524	40.80		46	3.48	2	3	.23	26.38	2.05	477	40.82		39	3.24	2	3	.25	24.36	2.08	47	40.55		7	6.04				2.03	1.75		
Of the nervous system	216	16.82		39	2.95	2	3	.23	14.04	1.09	193	16.52		32	2.65	2	3	.25	13.12	1.12	23	19.85		7	6.04				.92	.79		
Of the eye and its adnexa	173	13.47		2	.15				6.76	.53	154	13.18		2	.17				5.74	.49	19	16.39						1.02	.88		
Of the ear and its adnexa	135	10.51		5	.38				5.59	.44	130	11.13		5	.42				5.50	.47	5	4.31						.09	.08		
Diseases of the circulatory system	418	32.55		15	1.14	8	9	.68	24.56	1.91	390	33.38		13	1.08	6	6	.50	23.06	1.97	28	24.16		2	1.73	2	3	2.59	1.49	1.29		
Diseases of the respiratory system	585	45.55		3	.23		1	.08	14.90	1.16	501	42.88		3	.25		1	.08	13.76	1.18	84	72.48						1.14	.99		
Diseases of the digestive system	2,675	208.27	1	7	.53	7	9	.68	68.20	5.31	2,426	207.62	1	5	.42	6	8	.66	63.75	5.46	249	214.84		2	1.73	1	1	.86	4.45	3.84		
Diseases of the genito-urinary system	199	15.49		2	.15	1	1	.08	7.48	.58	190	16.26		1	.08	1	1	.08	7.15	.61	9	7.77		1	.86				.34	.29		
Diseases of the skin and cellular tissue	1,496	116.47							41.98	3.27	1,392	119.13							39.01	3.34	104	89.73						2.97	2.56		
Diseases of the organs of locomotion	349	27.17		2	.15				12.44	.97	302	25.85		2	.17				11.67	1.00	47	40.55						.77	.67		
Malformations, etc	9	.70		3	.23				.88	.07	8	.68		3	.25				.63	.05	1	.86						.26	.22		
Ill-defined diseases	463	36.05					1	.08	8.91	.69	436	37.31					1	.08	7.92	.68	27	23.30						.99	.85		
Total for diseases	14,854	1,156.49	4	139	10.52	44	54	4.09	609.21	47.43	13,547	1,159.35	4	119	9.87	39	46	3.82	561.15	48.02	1,307	1,127.70		20	17.26	5	8	6.90	48.06	41.47		
External causes	2,460	191.53		12	.91	31	31	2.35	66.03	5.14	2,244	192.04		12	1.00	28	28	2.32	60.32	5.16	216	186.37				3	3	2.59	5.71	4.93		
Total for diseases and external causes	17,314	1,348.02	4	151	11.43	75	85	6.43	675.25	52.57	15,791	1,351.39	4	131	10.87	67	74	6.14	621.48	53.19	1,523	1,314.06		20	17.26	8	11	9.49	53.77	46.40		

[a] Number of discharges and deaths which actually occurred in the Philippines Division.
[b] Number of discharges and deaths charged to the Philippines Division, including those of cases invalided home and deducted from the United States and transports.

TABLE NO. 66.—*Admissions to sick report, discharges, deaths, and noneffectiveness, with ratios per 1,000 of mean strength, for the year 1909—American troops on transports, Porto Rican native troops, and Filipino troops.*

Causes of admission to sick report.	Transports, total.								Porto Rican native troops.								Philippine Scouts.							
Mean strength	S. G. O., 1,669—A. G. O., 2,074.								S. G. O., 567—A. G. O., 567.								S. G. O., 5,369—A. G. O., 5,539.							
	Admissions.		Discharges.		Deaths.			Noneffective.	Admissions.		Discharges.		Deaths.		Noneffective.		Admissions.		Discharges.		Deaths.		Noneffective.	
	Number.	Ratio.	Number.	Ratio.	Number. [a]	Number. [b]	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.
Typhoid fever (including paratyphoid fever)	5	3.00						0.17	0.10	3	5.29			1	1.76	0.49	0.86	7	1.30			1	0.18	1.05	0.20
Fevers, undetermined	11	6.59						.19	.11	2	3.53					.01	.02	95	17.69					1.47	.27
Malarial fevers	73	43.74						1.32	.79	102	179.89					2.73	4.82	1,095	203.95					21.75	4.05
Intermittent	59	35.35						.74	.44	81	142.86					2.17	3.83	967	180.11					17.92	3.34
Aestivo-autumnal	9	5.39						.18	.11	20	35.27					.54	.96	110	20.49					3.22	.60
Malarial cachexia and undetermined infection	5	3.00						.40	.24	1	1.76					.02	.03	18	3.35					.61	.11
Smallpox										2	3.53					.18	.29	3	.56					.27	.05
Measles	4	2.40						.18	.11	10	17.64					.53	.93								
Influenza										47	82.89					.64	1.13	23	4.28					.32	.06
Asiatic cholera																		9	1.68			7	1.26	.30	.06
Cholera nostras																		1	.19					.05	.01
Dysentery	9	5.39						4.35	2.60	8	14.11	1	1.76			.61	1.08	51	9.50			1	.18	3.02	.56
Amebic	3	1.80						3.33	2.00	5	8.82	1	1.76			.41	.72	24	4.47					1.73	.32
Bacillary	1	.60						.37	.22	3	5.29					.21	.36	8	1.49					.33	.06
Mixed infections and other dysenteries	5	3.00						.64	.38									19	3.54			1	.18	.96	.18
Beriberi	1	.60						.27	.16									558	103.93	33	5.96	12	2.17	6.20	11.96
Erysipelas																		1	.19					4.02	.0004
Dengue	10	5.99						.11	.06									66	12.29					1.17	.22
Mumps	7	4.19						.18	.11	2	3.53					.09	.16	17	3.17					.48	.09
Cerebrospinal meningitis, epidemic	1	.60			1	1	0.48	.01	.01																
Yaws (frambesia)																		2	.37	1	.18			.31	.06
Vaccinia	3	1.80						.12	.07	2	3.53					.06	.11	12	2.24					.12	.02
Purulent infection and septicemia																		2	.37			2	.36	.03	.01
Tuberculosis (all)	5	3.00			1			5.08	3.41	2	3.53					.15	.26	32	5.96	28	5.06			3.93	.73
Tuberculosis, pulmonary	4	2.40			1			5.50	3.29	1	1.76					.02	.03	31	5.77	28	5.06			3.88	.72
Tuberculosis of other organs	1	.60						.19	.11	1	1.76					.13	.23	1	.19					.04	.01
Venereal diseases (all)	217	130.02						11.23	6.73	142	250.44	1	1.76			8.17	14.41	261	48.61	2	.36			19.28	3.59
Syphilis and its results	56	33.55						4.07	2.44	19	33.51	1	1.76			1.61	2.84	22	4.10					3.53	.66
Chancroid and its results	47	28.16						1.60	.97	51	89.95					2.69	4.75	19	3.54					1.27	.24
Gonorrhea and its results	114	68.30						5.56	3.33	72	126.98					3.87	6.83	220	40.98	2	.36			14.48	2.70

Cancer and other malignant growths																														.07	.04		
Rheumatism, articular (all)	22	13.18																												.85	.51	5	8.82
Rheumatic fever	14	8.39																												.33	.20	5	8.82
Rheumatism, subacute and chronic, articular	8	4.79																												.52	.31		
Alcoholism and its results	14	8.39																												.32	.19	1	1.76
Insanity	3	1.80																												1.92	1.15	2	3.53
Epilepsy	2	1.20																												.65	.39		
Trachoma																														.15	.09		
Organic disease of the heart	3	1.80																												1.07	.64		
Aneurism	1	.60																												.33	.20		
Filariasis																														.08	.05	13	22.93
Chyluria																														.08	.05		
Lymphangitis and elephantoid fever																																11	19.40
Other filariasis																																1	1.76
Bilharziosis																																1	1.76
Functional diseases of the heart																														.60	.36		
Bronchitis, acute and chronic	60	35.95																												.95	.57	17	29.98
Broncho-pneumonia	1	.60																												.03	.02		
Pneumonia (pneumonic fever)	14	8.39																												.51	.31		
Diarrhea and enteritis	81	48.53																												1.28	.77	17	29.98
Intestinal parasites																																5	8.82
Tenia sagimata																																	
Ascaris lumbricoides																																	
Ankylostomum duodenale																																	
Necator Americanus																																5	8.82
Other intestinal parasites																																	
Inguinal and other hernia	5	3.00																												.38	.23	4	7.05
Hepatic abscess																														.21	.12		
Appendicitis	7	4.19																												.45	.27	1	1.76
Climatic bubo																																	
Tropical ulcer	2	1.20																												.07	.04		
Pemphigus contagiosus	2	1.20																												.04	.02	1	1.76
Dhobie itch	3	1.80																												.05	.03	2	3.53
Tenia imbricata																																	
Prickly heat	1	.60																												.02	.01		
Acute nephritis																																	
Chronic nephritis																														.24	.14	1	1.76
Malingering																																	
External causes, special.																																	
Fractures, exclusive of gunshot	8	4.79																												1.13	.67	1	7.05
Dislocations	4	2.40																												.18	.11		
Sprains and muscular strains	13	7.79																												.33	.20	13	22.93
Wounds, gunshot																														.29	.18	2	3.53
Wounds other than gunshot	14	8.39																												.90	.54	11	19.40
Drowning																																	
Poisoning, acute	3	1.80																												.01	.005	1	1.76
Venomous bites, etc																																1	1.76
Snake bite																																	
Other venomous bites, etc																																1	1.76

Cancer and other malignant growths																																	
Rheumatism, articular (all)																																	
Rheumatic fever																																	
Rheumatism, subacute and chronic, articular																																	
Alcoholism and its results																																	
Insanity																																	
Epilepsy																																	
Trachoma																																	
Organic disease of the heart																																	
Aneurism																																	
Filariasis																																	
Chyluria																																	
Lymphangitis and elephantoid fever																																	
Other filariasis																																	
Bilharziosis																																	
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Pneumonia (pneumonic fever)																																	
Diarrhea and enteritis																																	
Intestinal parasites																																	
Tenia sagimata																																	
Ascaris lumbricoides																																	
Ankylostomum duodenale																																	
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Inguinal and other hernia																																	
Hepatic abscess																																	
Appendicitis																																	
Climatic bubo																																	
Tropical ulcer																																	
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Venomous bites, etc																																	
Snake bite																																	
Other venomous bites, etc																																	

[a] Number of deaths actually occurring on transports.

[b] Number of deaths on transports excluding those invalided home and charged to the Philippines.

TABLE No. 66.—*Admissions to sick report, discharges, deaths, and noneffectiveness, with ratios per 1,000 of mean strength, for the year 1909—American troops on transports, Porto Rican native troops, and Filipino troops*—Continued.

Causes of admission to sick report.	Transports, total.								Porto Rican native troops.								Philippine Scouts.							
Mean strength	S. G. O., 1,669—A. G. O., 2,074.								S. G. O., 567—A. G. O., 567.								S. G. O., 5,369—A. G. O., 5,539.							
	Admissions.		Discharges.		Deaths.			Noneffective.	Admissions.		Discharges.		Deaths.		Noneffective.		Admissions.		Discharges.		Deaths.		Noneffective.	
	Number.	Ratio.	Number.	Ratio.	Number.[a]	Number.[b]	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.
Diseases and injuries grouped.																								
General diseases	373	223.49			2	1	0.48	25.13	15.06	342	603.17	3	5.29	1	1.76	14.24	25.12	2,176	405.29	64	11.55	24	4.33	118.45	22.06
Infectious diseases	113	67.71			1	1	.48	6.69	4.01	191	336.86	1	1.76	1	1.76	5.38	9.49	1,851	344.76	34	6.14	21	3.79	93.42	17.40
Other general diseases	260	155.78			1			18.44	11.05	151	266.32	2	3.53			8.86	15.63	325	60.53	30	5.42	3	.54	25.03	4.66
Diseases of the nervous system and organs of special sense	87	52.13			1			5.86	3.51	14	24.69			1	1.76	.63	1.10	155	28.87	4	.72			4.38	.82
Of the nervous system	61	36.55			1			4.73	2.84	8	14.11			1	1.76	.48	.84	51	9.50	4	.72			1.56	.29
Of the eye and its adnexa	14	8.39						.68	.41	6	10.58					.15	.27	83	15.46					2.28	.42
Of the ear and its adnexa	12	7.19						.44	.27									21	3.91					.55	.10
Diseases of the circulatory system	21	12.58						2.66	1.59	29	51.15					1.43	2.53	52	9.69	3	.54	4	.72	2.67	.50
Diseases of the respiratory system	133	79.69			1	1	.48	2.83	1.69	34	59.96			1	1.76	.84	1.48	333	62.02	3	.54	4	.72	9.12	1.70
Diseases of the digestive system	258	154.58						6.40	3.84	78	137.57	1	1.76	1	1.76	1.69	2.98	920	171.35			1	.18	14.68	2.73
Diseases of the genito-urinary system	6	3.59						.58	.35	17	29.98					.81	1.43	28	5.22	1	.18	1	.18	2.37	.44
Diseases of the skin and cellular tissue	71	42.54						1.62	.97	88	155.20					1.83	3.23	566	105.42					16.47	3.07
Diseases of the organs of locomotion	25	14.98						1.33	.79	12	21.16					.53	.62	107	19.91					2.83	.53
Malformations, etc								.38	.23	1	1.76	1	1.76			.10	.18	2	.37	1	.18			.01	.001
Ill-defined diseases	26	15.58						.69	.41	2	3.53					.01	.02	123	22.99					2.33	.43
Total for diseases	1,000	599.16			4	2	.96	47.49	28.46	617	1,088.18	5	8.82	4	7.05	21.95	38.70	4,462	831.07	76	13.72	34	6.14	173.30	32.28
External causes	76	45.54			1	1	.48	4.20	2.52	57	100.53	1	1.76	3	5.29	2.45	4.33	574	106.91	4	.72	7	1.26	15.21	2.83
Total for diseases and external causes	1,076	644.70			5	3	1.45	51.69	30.97	674	1,188.71	6	10.58	7	12.35	24.40	43.03	5,036	937.98	80	14.44	41	7.40	188.51	35.11

[a] Number of deaths actually occurring on transports.

[b] Number of deaths on transports excluding those invalided home and charged to the Philippines.

TABLE NO. 67.—*Total movement of sick for the United States Army at home compared with that of foreign armies.*

	United States (continental), year 1909 (American troops, enlisted men).						British (United Kingdom), year 1908.		French (France), year 1907.		Prussian, year 1907.	
	White and colored.		White.		Colored.							
Mean strength	[a] 57,124		55,163		1,961		107,392		436,940		536,580	
	Total.	Hospital.	Total.	Hospital.	Total.	Hospital.	Total.	Hospital.	Total.	Hospital.	Total.	Hospital.
Admitted to sick report, total	[b] 58,516	44,527	57,031	43,298	1,485	1,229	101,619	45,960	[b] 931,838	335,517	320,256	131,318
Ratio per 1,000 of mean strength	1,024.37	779.48	1,033.86	784.91	757.27	626.72	946.2	428.0	2,132.65	767.88	596.8	244.7
Admitted for disease	46,943	.....	45,796	.....	1,147	.....	75,418	39,068	.....	.....	.....	.....
Ratio per 1,000 of mean strength	821.77	.....	830.19	.....	584.91	.....	702.2	363.8	.....	.....	.....	.....
Admitted for injury	11,573	.....	11,235	.....	338	.....	26,201	6,892	.....	.....	.....	.....
Ratio per 1,000 of mean strength	202.59	.....	203.67	.....	172.36	.....	244.0	64.2	.....	.....	.....	.....
Disposed of, all causes	58,791	.....	57,343	.....	1,448	.....	.....	.....	.....	.....	321,384	.....
Ratio per 1,000 of mean strength	1,029.18	.....	1,039.52	.....	738.40	.....	.....	.....	.....	.....	598.9	.....
Died, all causes	277	.....	264	.....	13	.....	299	.....	1,958	.....	968	.....
Ratio per 1,000 of mean strength	4.84	.....	4.77	.....	6.75	.....	2.52	.....	[c] 3.92	.....	[c] 1.8	.....
Ratio per 1,000 of all disposed of	4.71	.....	4.60	.....	8.98	.....	.....	.....	.....	.....	3.01	.....
Died of disease	170	.....	160	.....	10	.....	214	.....	1,720	.....	643	.....
Ratio per 1,000 of mean strength	2.97	.....	2.89	.....	5.19	.....	1.81	.....	3.44	.....	1.2	.....
Died of injury	107	.....	104	.....	3	.....	85	.....	238	.....	325	.....
Ratio per 1,000 of mean strength	1.87	.....	1.88	.....	1.56	.....	.71	.....	.47	.....	.6	.....
Died when on sick report or present with command	193	.....	182	.....	11	.....	256	.....	1,645	.....	684	.....
Ratio per 1,000 of mean strength	3.38	.....	3.30	.....	5.61	.....	2.16	.....	3.30	.....	1.3	.....
Ratio per 1,000 of all disposed of	3.28	.....	3.17	.....	7.60	.....	.....	.....	.....	.....	2.1	.....
Died when not on sick report or absent from command	84	.....	82	.....	2	.....	42	.....	313	.....	284	.....
Accidental deaths	80	.....	78	.....	2	.....	60	.....	160	.....	142	.....
Suicides	27	.....	26	.....	1	.....	25	.....	78	.....	183	.....
Returned to duty	56,256	.....	54,882	.....	1,374	.....	.....	.....	.....	.....	302,601	.....
Ratio per 1,000 of all disposed of	956.88	.....	957.08	.....	948.90	.....	.....	.....	.....	.....	941.6	.....
Otherwise disposed of	1,177	.....	1,153	.....	24	.....	.....	.....	.....	.....	17,815	.....
Ratio per 1,000 of all disposed of	20.02	.....	20.11	.....	16.57	.....	.....	.....	.....	.....	55.4	.....
Total days lost on account of sickness, all causes	827,723	731,054	800,155	705,799	27,568	25,255	1,225,485	940,843	6,528,579	5,055,492	4,876,587	.....
Constantly noneffective on account of sickness, all causes	2,267.73	2,002.89	2,192.21	1,933.70	75.53	69.19	3,348.32	2,570.61	17,886.52	13,850.66	13,360.51	.....
Ratio per 1,000 of mean strength	39.70	35.06	39.74	35.05	38.52	35.29	31.18	23.94	40.94	31.70	24.90	.....
Average days of treatment:												
For each soldier of mean strength	14.49	12.80	14.51	12.79	14.06	12.88	11.41	8.76	14.94	10.86	9.1	.....
For each case of sickness	14.15	16.42	14.03	16.30	18.56	20.55	11.91	20.47	7.01	14.50	14.8	.....
Discharges for disability, all causes	1,081	.....	1,044	.....	37	.....	1,486	.....	20,212	.....	23,755	.....
Ratio per 1,000 of mean strength	18.87	.....	18.86	.....	19.20	.....	12.54	.....	40.50	.....	44.3	.....
Total losses per 1,000 of mean strength	23.71	.....	23.63	.....	25.95	.....	15.06	.....	44.42	.....	46.1	.....

[a] Death and discharge ratios are calculated on the average strength present and absent, total 75,399, white 72,105, colored 3,294.

[b] Admissions in "chambre," French army, and in "quarters," American army are included under "Total;" and those in "infirmerie," French army, being synonomous with post hospital, American army, are included under "Hospital."

[c] The number of deaths is given as reported on International Table IX as the ratios therefrom afford better comparison with the same figures for American troops.

TABLE NO. 67.—*Total movement of sick for the United States Army at home compared with that of foreign armies*—Continued.

	Bavarian, year 1907.		Austro-Hungarian, year 1907.		Spanish, year 1907.		Belgian, year 1907.		Russian, year 1907.		Japanese, year 1907.		Dutch, year 1905.	
Mean strength	66,156.		285,455.		81,655.		36,113		1,285,772.		163,287.		28,399.	
	Total.	Hospital.	Total.	Hospital.	Total.	Hospital.	Total.	Hospital.	Total.	Hospital.	Total.	Hospital.	Total.	Hospital.
Admitted to sick report, total	32,616	14,335	235,936	109,578	90,630	33,514	.....	15,045	561,272	517,428	125,326	26,419	38,490	20,647
Ratio per 1,000 of mean strength	493.0	216.7	826.5	383.9	1,109.9	410.4	.....	416.61	436.5	402.4	767.52	161.80	1,355.33	727.03
Admitted for disease	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Ratio per 1,000 of mean strength	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Admitted for injury	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Ratio per 1,000 of mean strength	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Disposed of, all causes	32,633	.....	235,866	.....	90,898	.....	.....	15,112	562,344	.....	125,022	.....	39,076	.....
Ratio per 1,000 of mean strength	493.2	.....	826.3	.....	1,113.2	.....	.....	418.46	436.5	.....	765.66	.....	1,375.96	.....
Died, all causes	117	.....	925	.....	378	.....	.....	75	5,372	.....	761	.....	75	.....
Ratio per 1,000 of mean strength	*a* 1.8	.....	*a* 3.24	.....	*a* 4.6	.....	.....	*a* 2.08	*a* 4.17	.....	*a* 4.66	.....	*a* 2.64	.....
Ratio per 1,000 of all disposed of	3.6	.....	3.9	.....	4.2	.....	.....	4.96	9.55	.....	6.09	.....	1.92	.....
Died of disease	77	.....	639	.....	347	.....	.....	57	4,529	.....	616	.....	64	.....
Ratio per 1,000 of mean strength	1.2	.....	2.24	.....	4.24	.....	.....	1.58	3.52	.....	3.77	.....	2.25	.....
Died of injury	40	.....	286	.....	31	.....	.....	18	843	.....	145	.....	11	.....
Ratio per 1,000 of mean strength	.6	.....	1.00	.....	.4	.....	.....	.50	.65	.....	.89	.....	.39	.....
Died when on sick report or present with command	87	.....	.....	.....	378	.....	.....	47	.....	.....	605	.....	.....	.....
Ratio per 1,000 of mean strength	1.3	.....	.....	.....	4.6	.....	.....	1.3	.....	.....	3.71	.....	.....	.....
Ratio per 1,000 of all disposed of	2.7	.....	.....	.....	4.2	.....	.....	.....	.....	.....	4.84	.....	.....	.....
Died when not on sick report or absent from command	30	.....	.....	.....	.....	.....	.....	28	.....	.....	156	.....	.....	.....
Accidental deaths	20	.....	87	.....	21	.....	.....	11	633	.....	38	.....	10	.....
Suicides	20	.....	199	.....	10	.....	.....	7	210	.....	107	.....	1	.....
Returned to duty	30,319	.....	201,792	.....	85,135	.....	.....	13,225	501,374	.....	115,747	.....	36,528	.....
Ratio per 1,000 of all disposed of	929.1	.....	855.5	.....	936.6	.....	.....	875.1	891.6	.....	925.81	.....	934.79	.....
Otherwise disposed of	2,197	.....	33,149	.....	5,385	.....	.....	1,812	55,598	.....	8,514	.....	2,473	.....
Ratio per 1,000 of all disposed of	67.32	.....	140.5	.....	59.2	.....	.....	119.9	98.9	.....	68.10	.....	63.29	.....
Total days lost on account of sickness, all causes	541,388	.....	3,776,206	.....	891,463	.....	.....	305,749	.....	.....	2,069,510	.....	.....	107,991
Constantly noneffective on account of sickness, all causes	1,483.25	.....	10,345.77	.....	2,442.36	.....	.....	837.67	.....	.....	5,669.89	.....	.....	295.87
Ratio per 1,000 of mean strength	22.42	.....	36.26	.....	29.91	.....	.....	23.20	.....	.....	34.72	.....	.....	10.42

Average days of treatment:															
For each soldier of mean strength	8.2		13.2		10.9			8.47	10.7		12.67			3.8	
For each case of sickness	16.1		15.5		25.1			20.32	24.5		16.51			5.2	
Discharges for disability, all causes	3,174				2,954			632	56,441		5,691				
Ratio per 1,000 of mean strength	48.0				36.2			17.50	43.9		34.85				
Total losses per 1,000 of mean strength	49.8				40.8			19.58	48.1		39.51				

[a] The number of deaths is given as reported on International Table IX as the ratios therefrom afford better comparison with the same figures for American troops.

TABLE No. 68. *A comparison of the admission and death rates of the United States Army at home for certain special diseases with those of foreign armies.*

Diseases.	Admission rates per 1,000 of mean strength.													Death rates per 1,000 of mean strength.												
	United States continental (enlisted men), year 1909.			British (United Kingdom), year 1908.	French (France), year 1907.	Prussian, year 1907.	Bavarian, year 1907.	Austro-Hungarian, year 1907.	Spanish, year 1907.	Belgian, year 1907.	Russian, year 1907.	Japanese, year 1907.	Dutch, year 1905.	United States continental (enlisted men), year 1909.			British (United Kingdom), year 1908.	French (France), year 1907.	Prussian, year 1907.	Bavarian, year 1907.	Austro-Hungarian, year 1907.	Spanish, year 1907.	Belgian, year 1907.	Russian, year 1907.	Japanese, year 1907.	Dutch, year 1905.
	White.	Colored.	Total.											White.	Colored.	Total.										
1. Alcoholismus acutus, including delirium tremens	24.20	3.06	23.47	0.9	0.35	0.11	0.12	(a)	0.03	0.11	0.01	0.02	0.17	0.11	....	0.10	0.04	....	0.01	....	(a)	....	....	0.002	....	....
2. Appendicitis typhlitis, perityphlitis	4.01	6.12	4.08	(a)	(a)	3.8	3.7	(a)	.40	(a)	1.7	1.08	(a)	.04	....	.03	(a)	(a)	.10	0.12	(a)	....	(a)	.06	0.05	(a)
3. Bronchitis acuta	34.37	19.89	33.87	b14.9	88.11	47.6	48.6	c94.2	32.77	33.73	22.5	33.79	80.8	....	....	....	.02	0.01	....	....	c0.03	0.09	....	....	....	....
4. Cholera Asiatica	....	....	....	.2	....	....	....	....	....	....	.1	.02	....	....	....	....	.16	....	....	....	....	....	....	.03	.01	....
5. Cholera nostras	.02	....	.02	....	....	....	....	.0	....	....	.01	....	....	....	....	....	....	....	....	....	.00	....	....	....	....	....
6. Diphtheria et croup	.63	....	.61	.2	1.43	.48	.15	.1	.02	.53	.1	.02	.14	.05	....	.05	.00	.02	.01	....	.01	....	....	.003	.01	....
7. Dysenteria	1.90	2.55	1.93	5.3	1.08	.01	.02	.1	.10	.06	.7	.56	.03	....	....	....	.15	.01	....	....	.01	....	0.03	.05	.11	....
8. Erysipelas	.54	....	.53	.3	2.32	.90	.97	1.9	4.58	.91	3.4	.07	2.04	.04	....	.03	.01	.03	.01	.06	.01	.08	.06	.07	....	....
9. Febris intermittens (malaria)	20.74	7.65	20.29	87.7	.90	.08	.05	2.2	24.11	.14	36.5	28.69	5.2	....	....	....	.21	....	....	....	.00	.02	....	.03	.06	....
10. Febris recurrens	....	....	....	....	....	....	....	(a)	.06	....	.2	....	....	....	....	....	....	....	....	....	(a)	....	....	.002	....	....
11. Fractura ossium	11.46	3.57	11.19	(a)	(a)	6.3	4.8	2.6	1.34	(a)	1.7	2.06	(a)	.34	0.52	.35	(a)	(a)	.02	.08	.01	....	(a)	.01	.03	(a)
12. Gonorrhea	124.49	147.37	125.27	40.7	18.35	12.2	10.9	28.1	28.41	19.99	30.2	17.10	17.0	....	....	....	....	....	....	....	.02	....	....	....	....	....
13. Hernia	3.68	4.59	3.71	3.0	7.47	2.1	1.5	6.1	3.98	5.34	2.5	.75	3.9	....	....	....	....	.01	....	....	....	....	....	.004	....	....
14. Influenza	35.97	4.08	34.87	19.2	22.86	13.7	11.8	3.2	35.29	17.92	25.6	7.48	3.0	.02	....	.02	.00	.22	.01	....	.00	.13	....	.05	.05	....
15. Insolatio (Hitzschlag coup de chaleur)	.07	....	.07	1.3	.20	.12	.24	.2	.04	.25	.04	.66	.03	....	....	....	.18	....	.01	....	....	....	....	....	.02	....
16. Luxationes articulorum	3.15	3.06	3.15	(a)	(a)	1.3	1.3	.6	.56	(a)	.6	.84	(a)	....	....	....	(a)	(a)	....	.02	....	.01	(a)	....	....	(a)
17. Meningitis cerebro-spinalis epidemica	.24	....	.23	.1	.21	.10	.06	(a)	.11	.14	.01	.31	.03	.13	....	.12	.04	.07	.05	.05	(a)	.09	.08	.01	.12	0.03
18. Morbilli	10.41	....	10.05	1.8	15.95	.46	.38	.7	5.79	.14	.3	4.32	1.4	.14	....	.14	.01	.09	....	....	....	.01	.02	....	.01	.01	....
19. Parotitis epidemica	12.54	....	12.11	.2	28.32	.96	1.8	1.4	5.16	1.22	2.1	.83	.14	....	....	....	....	.01	....	....	....	....	....	....	....	....
20. Pleuritis	2.54	5.61	2.64	(a)	9.11	3.3	3.0	5.7	2.76	3.02	9.4	13.79	(a)	.04	.52	.05	(a)	.10	.04	.09	.09	.07	....	.18	.21	(a)
21. Pneumonia crouposa sive lobaris	2.08	5.61	2.21	c3.3	3.60	5.0	6.3	4.9	2.66	2.52	5.2	5.02	4.7	.33	1.04	.35	c.31	.32	.22	.24	.21	.22	....	.38	.30	.21
22. Rheumatismus, articulorum	14.83	8.16	14.60	7.4	24.09	7.0	8.1	12.4	18.74	14.95	5.9	6.56	11.4	.02	....	.02	.01	.02	.02	.03	.01	....	.03	.01	....	.105
23. Scarlatina	.40	.51	.40	1.3	6.70	.93	1.0	.3	.26	.47	.1	....	1.6	.02	....	.02	.01	.15	.03	.02	.02	.03	....	.01	....	....
24. Scorbutus	.02	....	.02	....	....	.01	....	.3	.01	....	.8	....	....	....	....	....	....	....	....	....	....	....	....	.004	....	....
25. Syphilis	26.47	37.74	26.85	35.1	6.75	4.4	3.3	16.0	11.64	6.12	17.7	10.13	4.6	....	....	....	.04	....	....	....	.01	....	....	.01	.01	....
26. Trachoma	.40	....	.39	.1	.04	.32	....	4.5	....	.28	5.3	11.43	.07	....	....	....	....	....	....	....	....	....	....	....	....	....
27. Tuberculosis pulmonum	4.01	2.55	3.96	1.6	5.19	1.4	1.7	1.4	5.59	3.52	2.4	3.99	4.3	.52	.52	.52	.19	.37	.11	.11	.42	.63	.44	.45	.17	.39
28. Tuberculosis ceterorum organorum	.74	2.04	.79	.5	2.25	.44	.26	2.5	.33	.49	1.2	.54	1.2	.11	.52	.12	.06	.39	.09	.09	.19	.04	.08	.09	.10	.14
29. Typhus abdominalis	3.10	1.02	3.03	6.0	3.74	.41	.17	2.1	2.87	.86	5.5	7.53	1.1	.27	.52	.28	1.00	.53	.06	.02	.27	.69	.17	.89	1.23	.14
30. Typhus exanthematicus	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	.00	....	....	....	....	....	....	.02	....	....
31. Ulcus molle	25.09	32.13	25.33	(a)	d2.73	2.1	.97	10.1	27.84	....	d12.2	10.42	(a)	....	....	....	(a)	....	....	....	....	....	....	....	....	(a)

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TABLE No. 69.—*Showing the most important diseases, by departments, in the United States.*

Diseases.	Absolute numbers—Admissions by departments.												Proportionate numbers—Admissions per 1,000 of mean strength.											
	Lakes.	East.	Gulf.	Dakota.	Missouri.	Texas.	Colorado.	Columbia.	California.	General hospitals.	Total.	White.	Colored.	Lakes.	East.	Gulf.	Dakota.	Missouri.	Texas.	Colorado.	Columbia.	California.	General hospitals.	Total.	White.	Colored.
1. Alcoholismus acutus, including delirium tremens	110	530	126	69	98	51	41	122	169	25	1,341	1,335	6	23.38	30.03	25.83	26.54	8.89	14.35	19.96	27.11	30.15	50.09	23.48	24.20	3.06
2. Appendicitis, typhlitis, perityphlitis	35	69	16	27	20	16	6	18	16	10	233	221	12	7.44	3.91	3.28	10.38	1.82	4.50	2.92	4.00	2.85	17.89	4.08	4.01	6.12
3. Bronchitis acuta	165	752	126	153	241	41	81	126	230	20	1,935	1,896	39	35.08	42.61	25.83	58.85	21.87	11.53	39.44	27.99	41.03	35.78	33.87	34.37	19.89
4. Cholera Asiatica	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
5. Cholera nostras	....	....	....	1	....	....	....	....	....	....	1	1	....	....	....	....	.38	....	....	....	....	....	....	.02	.02	....
6. Diphtheria et croup	9	13	....	8	2	....	....	2	1	....	35	35	....	1.91	.74	....	3.08	.18	....	....	.44	.18	....	.61	.63	....
7. Dysenteria	12	27	16	5	10	9	4	11	15	1	110	105	5	2.55	1.53	3.28	1.92	.91	2.53	1.95	2.44	2.68	1.79	1.93	1.90	2.55
8. Erysipelas	5	8	2	4	6	....	2	2	1	....	30	30	....	1.06	.45	.41	1.54	.54	....	.97	.44	.18	....	.53	.54	....
9. Febris intermittens (malaria)	54	345	164	17	348	110	16	35	63	7	1,159	1,144	15	11.48	19.55	33.62	6.54	31.58	30.94	7.79	7.78	11.24	12.52	20.29	20.74	7.65
10. Febris recurrens	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
11. Fractura ossium	50	155	50	34	130	48	25	53	85	9	639	632	7	10.63	8.78	10.25	13.08	11.80	13.50	12.17	11.78	15.17	16.10	11.19	11.46	3.57
12. Gonorrhea	796	2,054	661	320	1,356	428	203	573	688	77	7,156	6,867	289	169.22	116.38	135.51	123.08	123.06	120.39	98.83	127.31	122.75	137.75	125.27	124.49	147.37
13. Hernia	21	64	18	12	31	5	9	23	26	3	212	203	9	4.46	3.63	3.69	4.62	2.81	1.41	4.38	5.11	4.64	5.37	3.71	3.68	4.59
14. Influenza	363	606	66	105	269	60	78	279	129	37	1,992	1,984	8	77.17	34.34	13.53	40.38	24.41	16.88	37.97	61.99	23.02	66.19	34.87	35.97	4.08
15. Insolatio (Hitzschlag coup de chaleur)	....	3	....	....	1	....	....	....	....	....	4	4	....	....	.17	....	....	....	.09	....	....	....	....	....	.07	.07	....
16. Luxationes articulorum	18	60	15	11	32	8	9	13	14	....	180	174	6	3.83	3.40	3.08	4.23	2.90	2.25	4.38	2.89	2.50	....	3.15	3.15	3.06
17. Meningitis cerebro-spinalis epidemica	1	1	1	2	4	....	1	....	3	....	13	13	....	.21	.06	.21	.77	.36	....	.49	....	.54	....	.23	.24	....
18. Morbilli	142	159	18	13	73	....	2	100	64	3	574	574	....	30.19	9.01	3.69	5.00	6.62	....	.97	22.22	11.42	5.37	10.05	10.41	....
19. Parotitis epidemica	153	126	20	16	271	23	....	48	31	4	692	692	....	32.53	7.14	4.10	6.15	24.59	6.47	....	10.66	5.53	7.16	12.11	12.54	....
20. Pleuritis	23	47	4	9	12	4	8	9	28	7	151	140	11	4.89	2.66	.82	3.46	1.09	1.13	3.89	2.00	5.00	12.52	2.64	2.54	5.61
21. Pneumonia crouposa sive lobaris	10	39	9	6	20	2	10	12	12	6	126	115	11	2.13	2.21	1.85	2.31	1.82	.56	4.87	2.67	2.14	10.73	2.21	2.08	5.61
22. Rheumatismus articulorum	120	221	20	52	214	24	37	49	83	14	834	818	16	25.51	12.52	4.10	20.00	19.42	6.75	18.01	10.89	14.81	25.04	14.60	14.83	8.16
23. Scarlatina	....	8	....	7	1	....	5	1	1	....	23	22	1	....	.45	....	2.69	.09	....	2.43	.22	.18	....	.40	.40	.51
24. Scorbutus	....	....	....	....	....	....	....	1	....	....	1	1	....	....	....	....	....	....	....	....	.22	....	....	.02	.02	....
25. Syphilis	170	428	186	116	264	93	47	103	113	14	1,534	1,460	74	36.14	24.25	38.13	44.62	23.96	26.16	22.88	22.88	20.16	25.04	26.85	26.47	37.74
26. Trachoma	6	10	2	....	1	1	....	1	1	....	22	22	....	1.28	.57	.41	....	.09	.28	....	.22	.18	....	.39	.40	....
27. Tuberculosis pulmonum	15	61	12	15	50	11	3	20	24	15	226	221	5	3.19	3.46	2.46	5.77	4.54	3.09	1.46	4.44	4.28	26.83	3.96	4.01	2.55
28. Tuberculosis ceterorum organorum	9	19	4	....	3	1	4	3	2	....	45	41	4	1.91	1.08	.82	....	.27	.28	1.95	.67	.36	....	.79	.74	2.04
29. Typhus abdominalis	10	41	15	4	54	25	6	8	5	5	173	171	2	2.13	2.32	3.08	1.54	4.90	7.03	2.92	1.78	.89	8.94	3.03	3.10	1.02
30. Typhus exanthematicus	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
31. Ulcus molle	178	324	210	40	324	127	26	65	141	12	1,447	1,384	63	37.84	18.36	43.05	15.38	29.40	35.72	12.66	14.44	25.16	21.47	25.33	25.09	32.13
32. Variola	....	....	....	....	....	....	1	1	....	....	2	1	1	....	....	....	....	....	....	.49	.22	....	....	.04	.02	.51

33. Morbi auris	51	146	27	25	48	17	25	28	37	8	412	408	4	10.84	8.27	5.54	9.62	4.36	4.78	12.17	6.22	6.60	14.31	7.21	7.40	2.04
34. Morbi cordis	26	48	6	8	19	16	....	19	9	6	157	146	11	5.53	2.72	1.23	3.08	1.72	4.50	.....	4.22	1.61	10.73	2.75	2.65	5.61
35. Morbi cutis	159	471	175	53	181	66	23	73	161	7	1,369	1,339	30	33.80	26.69	35.88	20.38	16.43	18.57	11.20	16.22	28.72	12.52	23.97	24.27	15.30
36. Morbi mentis	11	31	8	2	11	8	2	7	9	4	93	89	4	2.34	1.76	1.64	.77	1.00	2.25	.97	1.56	1.61	7.16	1.63	1.61	2.04
37. Morbi oculi	163	226	66	55	132	40	41	57	89	12	881	864	17	34.65	12.81	13.53	21.15	11.98	11.25	19.96	12.66	15.88	21.47	15.42	15.66	8.67
38. Morbi systemat. urin. et sexual (excluding venerie et syphilis)	94	236	100	34	133	39	28	62	77	16	819	806	13	19.98	13.37	20.50	13.08	12.07	10.97	13.63	13.77	13.74	28.62	14.34	14.61	6.63

TABLE NO. 70.—*Comparative figures, army, by years 1905–1909.*

ABSOLUTE NUMBERS.

Army.	Mean strength.	Admissions to sick report.		Discharges on surgeon's certificate of disability.		Deaths.		Total losses.		Total days.				Constantly noneffective.			
										From all causes.		Excluding injuries, venereal diseases, vaccinia, and alcoholism.		From all causes.		Excluding injuries, venereal diseases, vaccinia and alcoholism.	
		From all causes.	Excluding injuries, venereal diseases, vaccinia, and alcoholism.	From all causes.	Excluding injuries, venereal diseases, vaccinia, and alcoholism.	From all causes.	Excluding injuries, venereal diseases, vaccinia, and alcoholism.	From all causes.	Excluding injuries, venereal diseases, vaccinia, and alcoholism.	Total.	In hospital.	Total.	In hospital.	Total.	In hospital.	Total.	In hospital.
Year 1909.....	74,319	79,000	46,809	1,270	918	370	221	1,640	1,139	1,125,333	994,411	597,032	534,125	3,083.10	2,724.41	1,635.70	1,463.36
Year 1908.....	65,406	77,704	46,110	1,248	928	414	217	1,662	1,195	1,021,690	888,590	566,864	502,635	2,791.50	2,427.84	1,548.81	1,373.32
Year 1907.....	53,803	65,546	39,774	1,107	805	319	177	1,426	982	906,750	781,140	512,030	453,791	2,484.25	2,140.10	1,402.82	1,243.36
Year 1906.....	56,443	72,071	45,506	1,523	1,182	358	183	1,881	1,365	1,025,815	850,393	591,750	505,930	2,810.45	2,329.84	1,621.23	1,386.11
Year 1905.....	56,901	73,742	44,910	1,464	1,102	368	190	1,832	1,292	1,016,230	841,488	583,602	495,130	2,784.19	2,305.45	1,598.95	1,356.52

TABLE No. 70.—*Comparative figures, army, by years 1905–1909*—Continued.

PROPORTIONAL NUMBERS.

Army.	Mean strength.	Ratios per 1,000 of mean strength.												Average number of days lost.			
		Admissions to sick report.		Discharges on surgeon's certificate of disability.		Deaths.		Total losses.		Noneffective from sickness.				From all causes.		Excluding injuries, venereal diseases, vaccinia, and alcoholism.	
										From all causes.		Excluding injuries, venereal diseases, vaccinia, and alcoholism.					
		From all causes.	Excluding injuries, venereal diseases, vaccinia, and alcoholism.	From all causes.	Excluding injuries, venereal diseases, vaccinia, and alcoholism.	From all causes.	Excluding injuries, venereal diseases, vaccinia, and alcoholism.	From all causes.	Excluding injuries, venereal diseases, vaccinia, and alcoholism.	Total.	In hospital.	Total.	In hospital.	For each soldier.	For each case.	For each soldier.	For each case.
Year 1909	74,319	1,062.99	629.84	16.84	12.18	4.91	2.93	21.75	15.11	41.48	36.66	22.01	19.69	15.14	14.24	8.03	12.75
Year 1908	65,406	1,188.03	704.98	18.48	13.75	6.13	3.21	24.61	16.96	42.68	37.12	23.68	21.00	15.62	13.15	8.67	12.29
Year 1907	53,803	1,218.26	739.25	20.15	14.65	5.81	3.22	25.96	17.87	46.17	39.78	26.08	23.11	16.85	13.83	9.52	12.87
Year 1906	56,443	1,276.88	806.23	26.00	20.18	6.11	3.12	32.11	23.30	49.79	41.28	28.72	24.56	18.17	14.23	10.48	13.00
Year 1905	56,901	1,295.97	789.27	25.00	18.82	6.28	3.24	31.28	22.06	48.93	40.52	28.10	23.84	17.86	13.78	10.26	13.00

TABLE No. 71.—*Influence of disease in the army, by length of service, age, and arms of service, for the year 1909.*

LENGTH OF SERVICE.

	Mean strength.	Admitted.	Discharged on surgeon's certificate of disability.	Died.	Constantly non-effective.	Ratios per 1,000 of mean strength. Admitted.	Discharged on surgeon's certificate of disability.	Died.	Constantly non-effective.
Under 1 year	17,364	20,201	537	54	785.52	1,163.38	30.70	3.09	45.24
1 to 2 years	17,756	16,622	256	31	721.63	936.13	14.22	1.72	40.64
2 to 3 years	9,033	7,752	54	15	298.09	858.19	5.85	1.63	33.00
3 to 4 years	5,602	3,820	72	16	168.26	681.90	12.67	2.82	30.04
4 to 5 years	4,891	3,433	56	15	137.33	701.90	11.26	3.02	28.08
5 to 10 years	11,076	7,507	106	34	313.72	677.77	9.40	3.02	28.32
10 years and over	8,597	5,019	65	63	222.94	583.81	7.42	7.20	25.93
Total	74,319	64,354	1,146	228	2,647.49	865.92	15.20	3.02	35.62

AGE.

19 years and under	3,167	3,978	69	7	143.14	1,256.08	21.62	2.19	45.20
20 to 24 years	31,041	32,785	528	77	1,298.07	1,056.18	16.79	2.45	41.82
25 to 29 years	20,691	16,064	321	45	684.27	776.38	15.28	2.14	33.07
30 to 34 years	10,300	6,464	134	39	283.29	627.57	12.80	3.72	27.51
35 to 39 years	4,844	2,717	50	25	121.17	560.90	10.14	5.07	25.01
40 to 44 years	2,522	1,389	28	21	65.25	550.75	10.90	8.18	25.87
45 to 49 years	1,264	609	13	8	31.74	481.80	10.12	6.23	25.11
50 years and over	490	348	3	6	20.55	710.20	6.01	12.02	41.94
Total	74,319	64,354	1,146	228	2,647.49	865.92	15.20	3.02	35.62

ARMS OF SERVICE.

Infantry	25,321	21,032	379	84	948.31	830.61	14.66	3.25	37.45
Cavalry	12,530	11,445	159	34	460.40	913.41	12.43	2.26	36.75
Field Artillery	4,971	4,300	70	12	182.56	865.02	13.92	2.39	36.72
Coast Artillery	18,668	16,027	322	50	639.38	858.52	17.16	2.66	34.25
Ordnance	700	393	4	5	12.83	561.43	5.68	7.10	18.33
Engineers	1,842	1,273	14	8	63.00	691.10	7.45	4.26	34.20
Signal Corps	1,157	861	14	2	39.45	744.17	11.82	1.69	34.09
Medical Department	3,431	2,156	42	8	90.68	628.39	12.09	2.30	26.43
All others	5,699	6,867	142	25	210.89	1,204.95	24.81	4.37	37.00
Total	74,319	64,354	1,146	228	2,647.49	865.92	15.20	3.02	35.62

INTERNATIONAL MILITARY MEDICAL STATISTICS FOR THE YEAR 1909.

The following tables are those agreed upon at the International Commission for the Unification of the Medical Statistics of Armies held at Budapest in 1894, at Madrid in 1903, and modified by the last meeting, held at Berlin in 1907. They are calculated for the United States Army proper (white and colored) and include enlisted men only. Dispositions include cases remaining from last year. Deaths include suicides and accidents. Days lost include those lost this year by cases remaining from last year.

Table I shows in absolute numbers, by departments, the mean strength of the command, the admissions to quarters, to hospital, and total admissions; the disposition of the sick, total, and the number returned to duty, died, and otherwise disposed of, and the total number of days of sickness.

Table II gives the same data in ratios per 1,000, and also shows the days lost per soldier and per admission.

Table III shows, by arms of service, the mean strength, the total admissions, and those to hospital only, the total dispositions, and the number of those returned to duty, and the number that died.

Table IV gives the same data as Table III by months.

Table V shows for each of 50 of the larger garrisons the mean strength, admissions to hospital, total admissions, and the deaths.

Table VI shows for each of the 38 diseases or disease groups agreed upon by the International Commission the number remaining under treatment at the commencement and close of the current year, the admissions and dispositions for the year, the total sick days, and the average number of days per case.

Table VII shows the admissions, by arms of service, for the diseases and disease groups referred to in Table VI.

Table VIII shows the same data as Table VII by months.

Table IX shows deaths by rank, by length of service, and by age.

Table X shows the same data as Table IX for discharges for physical disability.

INTERNATIONAL TABLE I.—*Movement of sick by army corps (departments), absolute numbers.*

Department.	Mean strength.	Admitted sick.			Sick disposed of.				Total days sick.
		Total.	To hospital.	To quarters.	Returned to duty (recovered).	Died.	Otherwise disposed of.	Total.	
United States (excluding Alaska):									
Department of the East	17,649	18,285	13,847	4,438	17,407	69	520	17,996	197,038
Department of the Gulf	4,878	5,494	4,337	1,157	5,277	16	181	5,474	68,199
Department of the Lakes	4,704	6,916	5,276	1,640	6,560	33	305	6,898	77,460
Department of the Missouri	11,019	9,573	7,739	1,834	9,310	41	278	9,629	123,068
Department of Dakota	2,600	3,204	2,673	531	3,052	13	118	3,183	36,912
Department of Texas	3,555	3,120	2,515	605	2,929	18	126	3,073	42,721
Department of the Colorado	2,054	2,169	1,702	467	2,055	12	100	2,167	28,133
Department of California	5,605	5,006	2,298	2,708	3,016	16	60	3,092	30,651
Department of the Columbia (excluding Alaska)	4,501	4,131	3,599	532	3,980	14	126	4,120	58,309
General hospitals	559	618	541	77	2,670	45	444	3,159	165,232
Total	57,124	58,516	44,527	13,989	56,256	277	2,258	58,791	827,723
Alaska	1,064	415	314	101	387	2	8	397	6,299

INTERNATIONAL TABLE I.—*Movement of sick by army corps (departments,) absolute numbers*—Continued.

Department.	Mean strength.	Admitted sick.			Sick disposed of.				Total days sick.
		Total.	To hospital.	To quarters.	Returned to duty (recovered).	Died.	Otherwise disposed of.	Total.	
Philippines Division:									
Department of Luzon	6,873	10,806	8,133	2,673	9,354	36	243	9,633	121,631
Department of the Visayas	1,952	2,206	1,951	255	2,084	7	69	2,160	31,084
Department of Mindanao	3,883	4,154	3,753	401	3,961	27	89	4,077	58,025
Interisland transports	33	12	11	1	9	1	.....	10	182
Division hospital, Manila	103	136	125	11	1,200	14	46	1,260	35,545
Total	12,844	17,314	13,973	3,341	16,608	85	447	17,140	246,467
Cuba	604	482	307	175	545	1	21	567	6,524
Hawaii	1,014	1,197	756	441	1,114	2	36	1,152	19,452
Army transports	1,669	1,076	1,008	68	1,046	3	19	1,068	18,868
United States Army	74,319	79,000	60,885	18,115	75,956	370	2,789	79,115	1,125,333

INTERNATIONAL TABLE II.—*Movement of sick by army corps (departments), proportionate numbers.*

Department.	In 1,000 of mean strength.			In 1,000 disposed of.			Days lost.	
	Total admissions.	Admissions to hospital.	Deaths.	Returned to duty (recovered).	Died.	Otherwise disposed of.	Per soldier.	Per admission.
United States (excluding Alaska):								
Department of the East	1,036.04	784.58	3.91	967.27	3.83	28.90	11.16	10.78
Department of the Gulf	1,126.28	889.09	3.28	964.01	2.92	33.07	13.98	12.41
Department of the Lakes	1,470.24	1,121.60	7.02	951.00	4.78	44.22	16.47	11.20
Department of the Missouri	868.77	702.33	3.72	966.87	4.26	28.87	11.17	12.86
Department of Dakota	1,232.31	1,028.08	5.00	958.84	4.08	37.07	14.20	11.52
Department of Texas	877.64	707.45	5.06	953.14	5.86	41.00	12.02	13.69
Department of the Colorado	1,055.99	828.63	5.84	948.31	5.54	46.15	13.70	12.97
Department of California	893.13	409.99	2.85	975.43	5.17	19.40	5.47	6.12
Department of the Columbia (excluding Alaska)	917.80	799.60	3.11	966.02	3.40	30.58	12.95	14.11
General hospitals	.....	.....	.....	845.20	14.25	140.55	.....	.....
Total	1,024.37	779.48	4.84	956.88	4.71	38.41	14.49	14.15
Alaska	390.04	295.11	1.75	974.81	5.04	20.15	5.92	15.18
Philippines Division:								
Department of Luzon	1,572.24	1,183.33	5.24	971.03	3.74	25.23	17.70	11.26
Department of the Visayas	1,130.12	999.49	3.59	964.82	3.24	31.94	15.92	14.09
Department of Mindanao	1,069.79	966.52	6.95	971.55	6.62	21.83	14.94	13.97
Interisland transports	.....	.....	.....	900.00	100.00	.....	.....	.....
Division hospital, Manila	.....	.....	.....	952.40	11.10	36.51	.....	.....
Total	1,348.02	1,087.90	6.43	968.96	4.96	26.08	19.19	14.24
Cuba	798.01	508.28	1.66	961.20	1.76	37.04	10.80	13.54
Hawaii	1,180.47	745.56	1.84	967.01	1.74	31.25	19.18	16.25
Army transports	644.70	603.95	1.45	979.40	2.81	17.79	11.30	17.53
United States Army	1,062.99	819.24	4.91	960.07	4.68	35.25	15.14	14.24

INTERNATIONAL TABLE III.—*Movement of sick by arms of service.*

Arms of service.	Absolute numbers.						Proportionate numbers.				
		Sick admissions.		Sick disposed of.			Per 1,000 of mean strength.			Per 1,000 of sick disposed of.	
	Mean strength.	Total.	To hospital.	Total.	Fit for duty (recovered).	Deaths.	Total sick admissions.	Admissions to hospital.	Deaths.[a]	Fit for duty (recovered).	Deaths.
Infantry	25,321	25,444	20,486	25,514	24,438	140	1,004.86	81.30	5.42	957.83	5.49
Cavalry	12,530	14,542	11,607	14,606	14,119	53	1,160.57	926.34	4.14	966.66	3.63
Coast artillery	18,668	20,386	14,683	20,427	19,636	78	1,092.03	786.10	4.16	961.28	3.82
Field artillery	4,971	5,390	4,239	5,313	5,123	31	1,084.29	852.75	6.17	964.24	5.83
Engineers	1,842	1,521	1,102	1,513	1,456	10	825.73	598.26	5.32	962.33	6.61
Ordnance	700	473	114	471	456	7	675.71	162.86	9.94	968.15	14.86
Signal corps	1,157	988	581	1,003	956	3	853.93	502.16	2.53	953.14	2.99
Hospital corps	3,431	2,437	1,958	2,416	2,305	16	710.29	570.68	4.61	954.06	6.62
Others	5,699	7,819	6,115	7,852	7,467	32	1,371.99	1,072.99	5.59	950.97	4.08
Total	74,319	79,000	60,885	79,115	75,956	370	1,062.99	812.25	4.91	960.07	4.68

[a] Ratios for deaths based on mean strength, present and absent, total 75,399.

INTERNATIONAL TABLE IV.—*Movement of sick by months, American troops at home.*

Month.	Absolute numbers.						Proportionate numbers.				
		Sick admissions.		Sick disposed of.			Per 1,000 of mean strength.			Per 1,000 sick disposed of.	
	Mean strength.	Total.	To hospital.	Total.	Fit for duty (recovered).	Deaths.	Total sick admissions.	Admissions to hospital.	Deaths. (a)	Fit for duty (recovered).	Deaths.
January	56,078	5,526	4,244	5,287	4,990	28	98.54	75.68	0.49	943.82	5.30
February	58,261	5,346	4,177	5,347	5,031	24	91.76	71.69	.41	940.90	4.49
March	58,846	6,581	4,954	6,454	6,159	30	111.83	84.19	.51	954.29	4.65
April	57,802	5,720	4,465	5,865	5,589	25	98.96	77.25	.44	952.94	4.26
May	56,956	4,664	3,487	5,077	4,785	26	81.89	61.22	.46	942.46	5.12
June	56,189	4,526	3,395	4,579	4,318	29	80.55	60.42	.52	943.00	6.33
July	55,261	4,516	3,315	4,605	4,401	20	81.72	59.99	.36	957.00	4.34
August	56,722	4,685	3,491	4,818	4,627	20	82.60	61.54	.37	960.56	4.15
September	56,867	4,032	3,020	4,120	3,990	16	70.90	53.11	.28	968.45	3.88
October	57,478	4,255	3,231	4,213	4,053	15	74.03	56.21	.26	962.02	3.56
November	57,399	4,205	3,254	4,146	4,007	23	73.26	56.69	.40	966.47	5.55
December	57,630	4,460	3,494	4,459	4,306	21	77.39	60.63	.36	965.69	4.71
Total	57,124	58,516	44,527	58,970	56,256	277	1,024.37	779.48	4.84	953.98	4.70

[a] Ratios for deaths based on mean strength, present and absent, total 57,274.

INTERNATIONAL TABLE IV (continued).—*Movement of sick by months, American troops in the Philippine Islands.*

Month.	Absolute numbers.						Proportionate numbers.				
	Mean strength.	Sick admissions.		Sick disposed of.			Per 1,000 of mean strength.			Per 1,000 sick disposed of.	
		Total.	To hospital.	Total.	Fit for duty (recovered).	Deaths.	Total sick admissions.	Admissions to hospital.	Deaths. (a)	Fit for duty (recovered).	Deaths.
January	12,633	1,349	1,069	1,285	1,248	11	106.78	84.62	0.87	971.21	8.56
February	12,493	1,213	971	1,133	1,096	6	97.09	77.72	.47	967.34	5.30
March	12,322	1,332	1,096	1,340	1,299	8	108.10	88.95	.62	969.40	5.97
April	13,146	1,341	1,139	1,291	1,244	7	102.01	86.64	.50	963.60	5.42
May	13,494	1,612	1,324	1,537	1,486	6	119.46	98.12	.45	966.82	3.90
June	13,302	1,702	1,238	1,669	1,603	11	127.95	93.07	.82	960.46	6.59
July	13,027	1,534	1,267	1,591	1,537	8	117.76	97.26	.61	966.06	5.03
August	13,202	1,607	1,182	1,554	1,509	4	121.72	89.53	.28	971.05	2.57
September	12,917	1,456	1,248	1,495	1,453	5	112.72	96.62	.38	971.91	3.34
October	12,654	1,532	1,301	1,455	1,415	5	121.07	102.81	.38	972.50	3.44
November	12,331	1,375	1,082	1,448	1,409	11	111.51	87.75	.85	973.06	7.60
December	12,606	1,261	1,056	1,342	1,309	3	100.03	83.77	.23	975.41	2.24
Total	12,844	17,314	13,973	17,140	16,608	85	1,348.02	1,087.90	6.43	968.96	4.96

a Ratios for deaths based on mean strength, present and absent, total 13,214.

INTERNATIONAL TABLE V.—*Movement of sick in the larger garrisons.*

Garrisons.	Mean strength.	Total admissions.		Admissions to hospital.		Deaths.	
		Absolute number.	Per 1,000 of mean strength.	Absolute number.	Per 1,000 of mean strength.	Absolute number.	Per 1,000 of mean strength.
Presidio of San Francisco, Cal	2,442	2,041	835.79	(a)	.....	2	0.82
Fort Leavenworth, Kans	2,305	1,995	865.51	1,736	753.14	10	4.34
Fort Riley, Kans	2,253	1,653	733.69	1,453	644.92	6	2.66
Fort D. A. Russell, Wyo	1,944	1,532	788.07	1,247	641.46	12	6.17
Fort Sam Houston, Tex	1,815	1,534	845.18	1,313	723.42	11	6.06
Vancouver Barracks, Wash	1,314	1,135	863.77	1,091	830.29	3	2.28
Fort Monroe, Va	1,239	1,441	1,163.03	1,155	932.20	9	7.26
Columbus Barracks, Ohio	1,111	2,459	2,213.32	2,226	2,003.60	8	7.20
Fort Snelling, Minn	1,107	1,547	1,397.47	1,273	1,149.95	7	6.32
Fort Slocum, N. Y	1,080	1,824	1,688.89	1,464	1,355.56	4	3.70
Jefferson Barracks, Mo	1,052	1,340	1,273.76	1,112	1,057.03	5	4.75
Fort Sheridan, Ill	943	1,201	1,273.59	998	1,058.32	10	10.60
Presidio of Monterey, Cal	932	568	609.44	538	577.25	5	5.36
Fort Benjamin Harrison, Ind	866	1,255	1,449.19	735	848.73	8	9.24
Fort Hancock, N. J	837	756	903.23	534	637.99	3	3.58
Fort Douglas, Utah	757	591	780.71	510	673.71	5	6.61
Fort Des Moines, Iowa	754	730	968.17	510	676.39	.....	.....
Fort Myer, Va	747	801	1,072.29	738	987.95	.....	.....
Fort Totten, N. Y	743	901	1,212.65	593	798.12	4	5.38
Fort Oglethorpe, Ga	743	730	982.50	704	947.51	1	1.35
Fort Adams, R. I	711	839	1,180.03	706	992.97	3	4.22
Fort Worden, Wash	708	623	879.94	547	772.60	4	5.65
Fort McPherson, Ga	699	805	1,151.65	753	1,077.25	4	5.72
West Point (Military Academy), N.Y.	668	725	1,085.33	550	823.35	1	1.50
Fort Ethan Allen, Vt	635	408	642.52	355	559.06	4	6.30
Fort Logan, Colo	618	824	1,333.33	569	920.71	5	8.09
Fort Barrancas, Fla	609	750	1,231.53	412	676.52	1	1.64
Fort Gibbon, Alaska	255	64	250.98	54	211.76	.....	.....
Fort William H. Seward, Alaska	189	99	523.81	87	460.32	.....	.....
Fort Liscum, Alaska	181	70	386.74	62	342.54	1	5.52
Fort Davis, Alaska	148	68	459.46	38	256.76	1	6.76
Fort St. Michael, Alaska	146	40	273.97	31	212.33	.....	.....
Fort Egbert, Alaska	145	74	510.34	42	289.66	.....	.....
Schofield Barracks (Oahu Cantonment), Hawaii	516	563	1,091.09	264	511.63	.....	.....
Fort Shafter, Hawaii	231	393	1,701.30	337	1,458.87	2	8.66
Fort De Russey, Hawaii	152	131	861.84	72	473.68	.....	.....
Fort William McKinley, P. I	2,620	3,669	1,400.38	3,102	1,183.96	12	4.58
Jolo Jolo, P. I	1,020	1,269	1,244.12	1,234	1,209.80	14	13.73
Camp Keithley, P. I	900	755	838.89	695	772.22	5	5.55
Camp Stotsenburg, P. I	844	2,100	2,488.15	1,818	2,154.03	2	2.37
Camp Jossman, P. I	784	1,027	1,309.95	858	1,094.39	2	2.55
Parang, P. I	780	994	1,274.36	904	1,158.97	6	7.69
Camp McGrath, P. I	778	1,703	2,188.95	1,103	1,417.74	9	11.57
Fort Mills, P. I	637	824	1,293.56	657	1,031.40	6	9.42
Cuartel de Espana, P. I	565	914	1,617.70	275	486.73	1	1.77
Malabang, P. I	388	418	1,077.32	321	827.32	1	2.58
Camp Overton, P. I	359	272	757.66	235	654.60	.....	.....
Camp Bumpus, P. I	351	442	1,259.26	409	1,165.24	1	2.85
Zamboanga, P. I	321	341	1,062.31	315	981.31	.....	.....
Camp Downes, P. I	304	187	615.13	182	598.68	2	6.58

a All hospital cases treated in General Hospital, San Francisco, Cal.

INTERNATIONAL TABLE VI. – *Movement of sick according to most important diseases.*

No. international nomenclature.	Diseases of the international nosological table.	Absolute numbers.									Proportionate numbers.					
		Remaining at close of 1908.	Admitted in 1909.	Total remaining and admitted.	Disposed of in 1909.				Remaining at close of 1909.	Total days sick in 1909.	Per 1,000 of mean strength.		Per 1,000 disposed of.			Average days of treatment.
					Fit for duty.	Died.	Otherwise.	Total.			Admissions.	Deaths.	Fit for duty.	Died.	Otherwise.	
1	Alkoholismus acutus, including delirium tremens	16	1,664	1,680	1,609	6	50	1,665	15	7,133	22.39	.08	966.37	3.60	30.03	4.29
2	Appendicitis, typhlitis, and perityphlitis	21	347	368	320	6	6	332	36	12,255	4.67	.08	963.86	18.07	18.07	35.32
3	Bronchitis acuta	51	2,329	2,380	2,286	.....	38	2,324	56	15,205	31.34	.....	983.65	.....	16.35	6.53
4	Cholera Asiatica	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
5	Cholera nostras	.....	2	2	2	.....	.....	2	.....	8	.03	.....	1,000.00	.....	.....	4.00
6	Diphtheria et croup	3	35	38	35	3	.....	38	.....	695	.47	.04	921.05	78.95	.....	19.86
7	Dysenteria	37	675	712	635	14	25	674	38	20,864	9.08	.19	942.14	20.77	37.09	30.91
8	Erysipelas	3	31	34	25	2	5	32	2	600	.42	.03	781.24	62.50	156.26	19.35
9	Febris intermittens (malaria)	25	2,196	2,221	2,172	.....	39	2,211	10	15,658	29.55	.....	982.36	.....	17.64	7.13
10	Febris recurrens	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
11	Fractura ossium	94	804	898	754	24	15	793	105	36,255	10.81	.33	950.81	30.27	18.92	45.09
12	Gonorrhea	531	10,090	10,621	9,683	.....	385	10,068	553	222,924	135.77	.....	961.76	.....	38.24	22.09
13	Hernia	37	268	305	238	.....	37	275	30	10,743	3.60	.....	865.44	.....	134.56	40.09
14	Influenza	16	2,008	2,024	1,956	1	40	1,997	27	11,670	27.02	.01	979.47	.50	20.03	5.81
15	Insolatio (Hitzschlag, coup de chaleur)	.....	7	7	6	.....	1	7	.....	131	.09	.....	857.14	.....	142.86	18.71
16	Luxationes articulorum	7	219	226	213	.....	6	219	7	3,710	2.95	.....	972.60	.....	27.40	16.94
17	Meningitis, cerebro-spinalis, epidemica	2	14	16	7	8	1	16	.....	574	.19	.11	437.55	500.00	62.55	41.00
18	Morbilli	66	580	646	574	8	50	632	14	13,208	7.80	.11	908.22	12.66	79.12	22.77
19	Parotitis epidemica	7	720	727	686	.....	40	726	1	11,067	9.69	.....	944.90	.....	55.10	15.37
20	Pleuritis	12	190	202	171	3	16	190	12	6,029	2.56	.04	900.00	15.79	84.21	31.73
21	Pneumonia crouposa sive lobaris	8	154	162	111	22	11	144	18	4,439	2.07	.29	770.83	152.78	76.39	28.82
22	Rheumatismus articulorum	55	980	1,035	916	1	68	985	50	14,239	13.19	.01	929.95	1.02	69.03	14.53
23	Scarlatina	.....	23	23	17	1	1	19	4	693	.31	.01	894.74	52.63	52.63	30.13
24	Scorbutus	.....	1	1	1	.....	.....	1	.....	10	.01	.....	1,000.00	.....	.....	10.00
25	Syphilis	164	2,263	2,427	2,019	.....	180	2,199	228	82,429	30.44	.....	918.14	.....	81.86	36.42
26	Trachoma	6	32	38	24	.....	6	30	8	1,346	.43	.....	800.00	.....	200.00	42.06
27	Tuberculosis pulmonum [a]	145	297	442	45	35	167	247	195	69,724	3.99	.46	182.19	141.70	676.11	234.76
28	Tuberculosis ceterorum organorum	10	53	63	33	8	11	52	11	3,980	.70	.11	634.61	153.85	211.54	75.09
29	Typhus abdominalis	27	267	294	217	19	1	237	57	17,413	3.59	.25	915.61	80.17	4.22	65.22
30	Typhus exanthematicus	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
31	Ulcus molle	131	2,287	2,418	2,199	.....	76	2,275	143	49,155	30.77	.....	966.59	.....	33.41	21.49
32	Variola	3	2	5	4	.....	.....	4	1	83	.03	.....	1,000.00	.....	.....	41.50
33	Morbi auris	22	581	603	548	.....	36	584	19	10,666	7.82	.....	938.36	.....	61.64	18.36

34	Morbi cordis [b]	14	187	201	88	26	69	183	18	7,817	2.52	.35	480.87	142.08	377.05	41.80
35	Morbi cutis [c]	42	1,828	1,870	1,795	.....	27	1,822	48	17,450	24.59	.....	985.18	.....	14.82	9.55
36	Morbi mentis [d]	19	120	139	7	1	121	129	10	7,691	1.62	.01	54.26	7.75	937.99	13.01
37	Morbi oculi	45	1,121	1,166	1,081	.....	52	1,133	33	14,585	15.08	.....	954.10	.....	45.90	64.09
38	Morbi systemat. urin. et sexual (excluding venerie et syphilis)	41	1,050	1,091	960	12	75	1,047	44	18,117	14.13	.16	916.91	11.46	71.63	17 25

[a] Includes tuberculosis of the lungs and larynx.
[b] Includes pericarditis and endocarditis.
[c] Includes diseases of the skin proper.
[d] Includes insanity only.

INTERNATIONAL TABLE VII.—*Most important diseases by arms of service.*

No. international nomenclature.	Diseases of the International nosological table.	Absolute numbers—Admissions by arms of service.									Proportionate numbers—Admissions per 1,000 of mean strength.								
		Infantry.	Cavalry.	Coast artillery.	Field artillery.	Engineers.	Ordnance.	Signal corps.	Hospital Corps.	Others.	Infantry.	Cavalry.	Coast artillery.	Field artillery.	Engineers.	Ordnance.	Signal Corps.	Hospital Corps.	Others.
1	Alkoholismus acutus, including delirium tremens	597	116	642	52	29	24	26	93	85	23.58	9.26	34.39	10.46	15.74	34.29	22.47	27.11	14.91
2	Appendicitis, typhlitis, and perityphlitis	117	47	64	17	5	....	7	38	52	4.62	3.75	3.43	3.42	2.71	.....	6.05	11.08	9.12
3	Bronchitis acuta	577	405	792	113	37	34	31	87	253	22.79	32.32	42.43	22.73	20.09	48.57	26.79	25.36	44.39
4	Cholera Asiatica	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
5	Cholera nostras	1	1	.....	.....	.....	.....	.....	.....	.....	.04	.08	.....	.....	.....	.....	.....	.....	.....
6	Diphtheria et croup	5	.....	6	7	1	....	1	3	12	.20	.....	.32	1.41	.54	.....	.86	.87	2.11
7	Dysenteria	365	138	61	31	39	....	7	24	10	14.42	11.01	3.27	6.24	21.17	.....	6.05	6.99	1.75
8	Erysipelas	14	2	5	3	.....	1	.....	1	5	.55	.16	.27	.60	.....	1.43	.....	.29	.88
9	Febris intermittens (malaria)	592	625	385	158	62	6	21	70	277	23.38	49.88	20.62	31.78	33.66	8.57	18.15	20.40	48.61
10	Febris recurrens	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
11	Fractura ossium	258	183	191	71	18	7	7	19	50	10.19	14.60	10.23	14.28	9.77	10.00	6.05	5.54	8.77
12	Gonorrhœa	3,716	2,001	2,313	724	199	6	130	243	755	146.76	159.94	123.90	145.64	108.03	8.57	112.36	70.82	132.48
13	Hernia	85	52	74	43	2	1	5	12	24	3.36	4.15	3.96	2.62	1.09	1.43	4.32	3.50	4.21
14	Influenza	658	148	707	151	37	25	18	118	146	25.99	11.81	37.87	30.38	20.09	35.71	15.56	34.39	25.62
15	Insolatio (Hitzschlag, coup de chaleur)	3	1	.....	2	1	.....	.....	.....	.....	.12	.08	.....	.40	.54	.....	.....	.....	.....
16	Luxationes articulorum	80	39	55	12	3	2	1	6	21	3.16	3.11	2.95	2.41	1.63	2.86	.86	1.75	3.68
17	Meningitis, cerebro-spinalis, epidemica	5	.....	4	1	.....	.....	.....	.....	4	.20	.....	.21	.20	.....	.....	.....	.....	.70
18	Morbilli	155	23	222	22	5	....	2	8	143	6.12	1.84	11.89	4.43	2.71	.....	1.73	2.33	25.09
19	Parotitis	148	52	175	36	37	1	19	18	234	5.84	4.15	9.37	7.24	20.09	1.43	16.42	5.25	41.06
20	Pleuritis	86	18	45	8	1	....	1	11	20	3.40	1.44	2.41	1.61	.54	.....	.86	3.21	3.51
21	Pneumonia crouposa sive lobaris	59	20	35	2	7	....	3	10	18	2.33	1.60	1.87	.40	3.80	.....	2.59	2.91	3.16
22	Rheumatismus articulorum	335	107	235	70	25	14	12	45	137	13.23	8.54	12.59	14.08	13.57	20.00	10.37	13.12	24.04
23	Scarlatina	12	1	1	5	.....	.....	.....	.....	4	.47	.08	.05	1.01	.....	.....	.....	.....	.70
24	Scorbutus	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.08	.....	.....	.....	.....	.....	.....	.....
25	Syphilis	947	456	458	146	62	4	23	50	117	37.40	36.39	24.53	29.37	33.66	5.71	19.88	14.57	20.53
26	Trachoma	11	3	5	.....	.....	.....	1	.....	12	.43	.24	.27	.....	.....	.....	.86	.....	2.11
27	Tuberculosis pulmonum [a]	101	48	60	20	9	5	5	33	16	3.99	3.83	3.21	4.02	4.89	7.14	4.32	9.62	2.81
28	Tuberculosis ceterorum organorum	19	3	13	.....	3	1	.....	4	10	.75	.24	.70	.....	1.63	1.43	.....	1.17	1.75
29	Typhus abdominalis	130	26	20	58	16	....	2	8	7	5.13	2.08	1.07	11.67	8.69	.....	1.73	2.33	1.23
30	Typhus exanthematicus	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
31	Ulcus molle	864	519	467	193	37	1	26	31	149	34.12	41.42	25.02	38.82	20.09	1.43	22.47	9.04	26.15
32	Variola	1	.....	.....	.....	.....	.....	.....	.....	1	.04	.....	.....	.....	.....	.....	.....	.....	.18
33	Morbi auris	188	96	147	37	5	3	6	19	80	7.42	7.66	7.87	7.44	2.71	4.29	5.19	5.54	14.04

34	Morbi cordis [b]	59	25	54	13	1	1	3	4	27	2.33	2.00	2.89	2.62	.54	1.43	2.59	1.17	4.74
35	Morbi cutis [c]	627	287	544	93	36	9	8	32	192	24.76	22.91	29.14	18.71	19.54	12.86	6.91	9.33	33.69
36	Morbi mentis [d]	37	19	36	6	2	4	1	8	7	1.46	1.52	1.93	1.21	1.09	5.71	.86	2.33	1.23
37	Morbi oculi	319	196	288	69	18	4	16	40	171	12.56	15.64	15.43	13.88	9.77	5.71	13.83	11.66	30.01
38	Morbi systemat. urin. as sexual (excluding venerie et syphilis)	290	158	310	75	13	9	20	40	135	11.45	12.61	16.60	15.09	7.06	12.86	17.29	11.66	23.69

[a] Includes tuberculosis of the lungs and larynx.
[b] Includes pericarditis and endocarditis.
[c] Diseases of the skin proper only.
[d] Insanity only.

INTERNATIONAL TABLE VIII.—*Most important diseases, by months.*

Number of international nomenclature.	Diseases of the international nosological table.	Admissions, by months.											
		January.	February.	March.	April.	May.	June.	July.	August.	September.	October	November.	December.
1	Alkoholismis acutus, including delirium tremens	145	125	151	123	123	153	129	135	124	130	150	176
2	Appendicitis, typhlitis, perityphlitis	27	22	30	27	39	33	25	33	31	22	29	29
3	Bronchitis acuta	275	255	364	259	172	110	98	117	124	153	179	223
4	Cholera Asiatica												
5	Cholera nostras				1		1						
6	Diphtheria et croup	2	4	6	5	8	7		1			2	
7	Dysenteria	61	42	35	36	60	78	87	85	43	56	64	28
8	Erysipelas	3	5	9	4	2	1		1	2	2		2
9	Febris intermittens (malaria) [a]	131	146	142	170	218	230	225	339	261	193	80	61
10	Febris recurrens												
11	Fractura ossium	55	71	73	66	65	55	79	77	60	61	68	74
12	Gonorrhea	930	872	989	918	805	815	833	792	778	813	768	777
13	Hernia	32	23	25	19	21	16	18	24	25	13	31	21
14	Influenza	164	281	706	410	103	41	31	26	19	48	70	106
15	Insolatio (Hitzschlag, coup de chaleur)					3	3	1					
16	Luxationes, articulorum	20	12	20	21	15	20	19	18	9	22	28	15
17	Meningitis cerebro-spinales epidemica	6	2	2	1	2							1
18	Morbilli	122	128	108	97	53	33	6		6	4	3	20
19	Parotitis epidemica	53	130	200	166	82	49	18	4	4	5	6	3
20	Pleuritis	13	19	18	21	24	16	13	11	16	8	18	13
21	Pneumonia crouposa sive lobaris	12	12	19	31	19	6	7	4	9	9	6	20
22	Rheumatismus articulorum	88	86	111	120	140	86	62	54	48	59	63	63
23	Scarlatina	2	4	4	3	2	4						4
24	Scorbutus			1									
25	Syphilis	204	167	218	190	212	185	181	184	145	199	195	183
26	Trachoma	7	4		2	2	1	3	4	2	1	2	4
27	Tuberculosis pulmonum [b]	34	35	30	34	27	26	24	17	17	21	17	15
28	Tuberculosis ceterorum organorum	11	7	7	3	2	2	2	4	1	6	5	3
29	Typhus abdominalis	4	13	13	8	15	17	31	22	16	91	25	12
30	Typhus exanthematicus												
31	Ulcus molle	192	194	209	197	172	136	171	197	190	210	222	197
32	Variola		1										1
33	Morbi auris	42	48	49	51	63	38	61	56	46	47	47	33
34	Morbi cordis [c]	14	19	16	22	11	24	19	19	11	13	9	10
35	Morbi cutis [d]	135	154	147	136	130	208	163	195	131	144	99	186
36	Morbi mentis [e]	20	9	9	10	14	9	6	14	7	3	17	2
37	Morbi oculi	123	95	128	136	114	75	79	69	70	71	82	79
38	Morbi systemat. urin. et sexual (excluding venerie et syphilis)	103	93	117	115	84	81	82	67	70	88	66	84

[a] Malarial fever, intermittent only. [b] Includes tuberculosis of larynx. [c] Includes pericarditis and endocarditis. [d] Diseases of the skin proper only. [e] Insanity only.

INTERNATIONAL TABLE IX.—*Deaths, by rank, by length of service, and by age.*

Causes of death.		Total number of deaths (enlisted men).		Deaths, by rank and length of service.				Deaths, by age.					
		Absolute numbers.	Per 1,000 of mean strength.	Noncommissioned officers.	Soldiers in first year of service.	Soldiers in second year of service.	Soldiers in third year of service and beyond.	20 and under.	21 to 25.	26 to 30.	31 to 35.	36 to 40.	41 and over.
Death from sickness	Soldiers present with troops	214	2.84	52	52	28	82	13	78	38	37	21	27
	Soldiers absent from troops	14	.19	4	1	1	8	....	1	3	3	1	6
Accidental deaths [a]	Soldiers present with troops	36	.48	6	8	5	17	2	11	10	5	2	6
	Soldiers absent from troops	73	.97	11	15	11	36	2	33	14	13	6	5
Suicides	Soldiers present with troops	10	.13	2	2	2	4	....	3	2	4	1	....
	Soldiers absent from troops	23	.31	8	2	....	13	....	6	9	5	2	1
Grand total		370	4.91	83	80	47	160	17	132	76	67	33	45

[a] Includes 15 homicides.

INTERNATIONAL TABLE X.—*Discharges from the army for physical disability, temporary or permanent, by rank, length of service, and by age.*

Causes of discharge.	Total discharges (enlisted men).		Rank and length of service.				Age.					
	Absolute numbers.	Per 1,000 of mean strength.	Noncommissioned officers.	Soldiers in first year of service.	Soldiers in second year of service.	Soldiers in third year of service and beyond.	20 and under.	21 to 25.	26 to 30.	31 to 35.	36 to 40.	41 and over.
Physical disability existent prior to enlistment	486	6.45	6	344	106	30	65	279	98	38	4	2
Physical disability incident to service	545	7.23	72	169	87	217	38	202	158	82	34	31
Physical disability not incident to service	239	3.17	9	89	76	65	18	135	55	19	6	6
Grand total	1,270	16.84	87	602	269	312	121	616	311	139	44	39

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FISCAL YEAR ENDED JUNE 30, 1911

REPORT OF THE

SURGEON GENERAL

U. S. ARMY

TO THE SECRETARY OF WAR

1911

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REPORT OF THE SURGEON GENERAL OF THE ARMY.

War Department,
Office of the Surgeon General,
Washington, September 1, 1911.

Sir: I have the honor to submit herewith a report upon the work of the Medical Department of the Army, together with a financial statement for the fiscal year ending June 30, 1911, and a study of the health and sanitary conditions of the Army for the calendar year 1910.

HEALTH OF THE ARMY.

OFFICERS.

The mean strength of officers was 4,216, as obtained from the reports of the sick and wounded of the Medical Department, and 4,416 from the office of The Adjutant General.

There were 2,515 admissions, 15 deaths, and 119.54 constantly noneffective from all causes, equal to ratios of 596.54, 3.40, and 28.35, as compared with ratios of 628.90, 4.20, and 30.27 per 1,000 for the year 1909.

The admission and constantly noneffective and death rates were lower than for 1909.

The principal causes of admission in the order of their importance were influenza, 51; diarrhea and enteritis, 40.09; bronchitis, 37; tonsillitis, 28.46; dyspepsia, 26.33; coryza, 24.67; and malarial fevers, 19.21, per 1,000.

OFFICERS RETIRED.

Thirty-seven officers were retired on account of disability during the year, making a rate of retirement for disability of 8.38 per 1,000 compared with 11.91 for 1909. The discharge rate for disability in enlisted men was 14.02.

The following table shows the principal causes for which retirements were made, and the rank and age of the officers retired:

Table No. 1.—*Retirements of officers, United States Army, year 1910, for disability, by causes and rank, grouped by ages.*

	Total.		Ages of officers, quinquennial groups.							
	Number.	Ratio per 1,000 of all officers.	24 years and under.	25 to 29 years.	30 to 34 years.	35 to 39 years.	40 to 44 years.	45 to 49 years.	50 to 54 years.	55 to 59 years.	60 years and over.
CAUSES OF RETIREMENT.											
Bright's disease	8	1.81	.....	1	2	2	1	1	1	.....	.....
Tuberculosis	6	1.36	.....	.....	2	2	1	.....	1	.....	.....
Organic heart disease	5	1.13	.....	.....	1	.....	.....	2	.....	2	.....
Neurasthenia	4	.91	.....	.....	2	1	.....	.....	1	.....	.....
Locomotor ataxia	2	.45	.....	.....	.....	.....	.....	1	1	.....	.....

TABLE NO. 1.—*Retirements of officers, United States Army, year 1910, for disability, by causes and rank, grouped by ages*—Continued.

	Total.		Ages of officers, quinquennial groups.								
	Number.	Ratio per 1,000 of all officers.	24 years and under.	25 to 29 years.	30 to 34 years.	35 to 39 years.	40 to 44 years.	45 to 49 years.	50 to 54 years.	55 to 59 years.	60 years and over.
CAUSES OF RETIREMENT—contd.											
Insanity	2	0.45			1	1					
Other diseases	8	1.81		1	3	2			1	1	
Results of injuries	2	.45				1	1				
RANK IN SERVICE.											
Brigadier general	1	.23							1		
Colonel	3	.68							1	2	
Lieutenant colonel	4	.91						2	1	1	
Major	8	1.81			1	2	1	2	2		
Captain	8	1.81			3	3	2				
First lieutenant	12	2.72		2	7	3					
Second lieutenant	1	.23				1					
Number of retirements for disability	37	8.38		2	11	9	3	4	5	3	
Number of officers in service	4,416		353	842	1,084	905	519	295	210	138	70
Retired for disability per 1,000 of each group				2.38	10.15	9.94	5.78	13.56	23.81	21.74	

The following table shows the cause of deaths of officers:

TABLE NO. 2.—*Deaths of officers, United States Army, year 1910, by causes and rank, grouped by ages.*

	Total.		Ages of officers, quinquennial groups.								
	Number.	Ratio per 1,000 of all officers.	24 years and under.	25 to 29 years.	30 to 34 years.	35 to 39 years.	40 to 44 years.	45 to 49 years.	50 to 54 years.	55 to 59 years.	60 years and over.
CAUSES OF DEATH.											
Cancer	2	0.45						1			1
Organic heart disease	2	.45					1		1		
Chronic interstitial nephritis	2	.45			1					1	
Typhoid fever	1	.23				1					
Diabetes mellitus	1	.23			1						
Pneumonia	1	.23								1	
Cholecystitis	1	.23				1					
Appendicitis	1	.23			1						
Gunshot wounds, suicidal	2	.45		2							
Fractured skull, thrown from horse	1	.23						1			
Drowned	1	.23				1					
RANK IN SERVICE.											
Colonel	1	.23									1
Lieutenant colonel	2	.45								2	
Major	2	.45			1			1			
Captain	3	.68			1		1		1		
First lieutenant	6	1.36		1	1	3		1			
Second lieutenant	1	.23		1							
Number of deaths	15	3.40		2	3	3	1	2	1	2	1
Number of officers in service	4,416		353	842	1,084	905	519	295	210	138	70
Death rates per 1,000 of each group				2.38	2.77	3.52	1.93	6.72	4.76	14.49	14.29

TEST EXERCISES FOR FIELD OFFICERS.

Of the 681 officers of field rank who were subject to the annual physical test, 24 were excused in 1910; in 12 the disability was regarded as permanent; in 3 as probably permanent; in 7 as only temporary; and 2 were excused without any cause having been stated.

As regards the rank and arm of the service they were distributed as follows:

	Rank.			
	Colonel.	Lieutenant colonel.	Major.	Total.
Infantry	1		3	4
Cavalry			1	1
Coast Artillery	1			1
Engineers	4	2		6
Medical Department	1	1	1	3
Quartermaster's Department	1	1	1	3
Ordnance Department	2			2
Pay Department			1	1
Others	1	2		3

ENLISTED MEN.

The mean enlisted strength of the Army, American troops, white and colored, for the year 1910, as reported on the monthly sick reports of the Medical Department, was 71,534, and on the returns of The Adjutant General's office, 71,814. The former represents the strength of the commands from which the sick returns were made and was used in calculating all ratios except those for deaths and discharges. As all deaths and discharges were reported, even of those absent from a command, the total strength as obtained from The Adjutant General was used in calculating ratios pertaining to those headings. This shows a considerable decrease in strength over the year 1909, for which the medical returns showed 74,319 and The Adjutant General's office, 75,399.

During the year 1910 American troops were stationed in the United States proper, the Philippine Islands, Alaska, and Hawaii. Native troops served in Porto Rico and the Philippines.

Statistics for the native troops, Porto Rican and Filipino, have been separately compiled, and when reference is made to the "Army" in this report the American Army proper, white and colored troops, is meant.

As in many diseases, notably the venereal and malarial, the same soldier is often admitted several times on account of the same case of illness, the total number of admissions is necessarily considerably greater than the actual number of cases. The extent of this discrepancy for diseases and injury is 6.82 per cent, as shown in the table following, in which, however, only those diseases are shown where the difference between admissions and cases was 10 or more.

TABLE NO. 3.—*Admissions and cases compared, United States Army, 1910.*

	Admissions and cases (men) compared.			
	Admissions.	Cases (men).	Excess of admissions over cases.	Percentage of admissions deducted to show cases.
Typhoid vaccination	747	647	100	13.39
Malarial fever	2,074	1,794	280	13.50
Tonsillitis	3,988	3,754	234	5.87
Influenza	1,319	1,273	46	3.49
Dysentery	369	334	35	9.49
Dengue	1,040	1,010	30	2.88
Vaccinia	818	789	29	3.55
Tuberculosis (all)	271	261	10	3.69
Syphilis	2,117	1,764	353	16.67
Chancroids	2,292	2,105	187	8.16
Gonorrhea	8,106	7,212	894	11.03
Acute articular rheumatism	503	447	56	11.13
Rheumatism, articular, subacute, and chronic	317	268	49	15.46
Alcoholism	1,712	1,458	254	14.84
Epilepsy	115	97	18	15.65
Neuralgia	378	352	26	6.88
Neurasthenia	134	124	10	7.46
Conjunctivitis	437	415	22	5.03
Diseases of the middle and internal ear	402	364	38	9.45
Organic diseases of the heart	150	137	13	8.67
Hemorrhoids	539	516	23	4.27
Lymphadenitis, nonvenereal	413	382	31	7.51
Functional diseases of the heart	120	106	14	11.67
Coryza	1,288	1,245	43	3.34
Acute bronchitis	1,981	1,873	108	5.45
Asthma	88	54	34	38.64
Diseases of the teeth, gums, and alveoli	646	615	31	4.80
Diseases of the pharynx	704	672	32	4.55
Dyspepsia	1,454	1,363	91	6.26
Gastritis	760	714	46	6.05
Diarrhea, acute	1,811	1,714	97	5.36
Enteritis	824	809	15	1.82
Intestinal parasites	230	212	18	7.83
Hernia	248	232	16	6.45
Constipation	1,309	1,254	55	4.20
Appendicitis	404	382	22	5.45
Furuncle	1,640	1,428	212	12.93
Acute abscess, phlegmon	1,039	980	59	5.68
Corns and warts	358	332	26	7.26
Ingrowing nails	433	406	27	6.24
Dermatitis from poisonous plants	347	320	27	7.78
Eczema and pemphigus	210	189	21	10.00
Scabies	340	316	24	7.06
Periostitis	69	58	11	15.94
Synovitis	196	173	23	11.74
Muscular rheumatism and myalgia	1,439	1,323	116	8.06
Congenital malformations	118	107	11	9.32
Debility following operation and disease	147	135	12	8.16
Under observation, undiagnosed, and unknown	486	469	17	3.50
Sprains	3,078	2,931	147	4.78
Strain, muscular	613	602	11	1.79
Abrasions and blisters (mechanical)	1,067	1,038	29	2.72
Contusions	2,801	2,697	104	3.71
Contused wounds	478	467	11	2.30
Lacerated wounds	1,162	1,139	23	1.98
Secondary results of injuries	433	393	40	9.24
Diseases and injuries, except as shown in detail	11,378	11,053	325	2.86
Grand total	67,940	63,304	4,636	6.82
Total for diseases	54,799	50,570	4,229	7.72
Total for external causes	13,141	12,734	407	3.10

CONSTANTLY NONEFFECTIVE RATE.

The constantly noneffective rate, which is the true measure of the loss in efficiency of the Army from sickness and injury, was 35.93 per 1,000, as compared with 41.48 for 1909, 42.68 for 1908, 46.17 for 1907, and 49.79 for 1906.

TOTAL ADMISSIONS TO SICK REPORT.

The total number of admissions to sick report was 67,940, equal to an admission rate of 949.76, as compared with 1,062.99 for the previous year and 1,188.03 for 1908. It is thus less than one admission for each soldier during the year and is the lowest rate since the acquisition of our tropical possessions.

DEATHS FROM ALL CAUSES.

The deaths from all causes numbered 320, of which 175 were from disease. The death rate for all causes was 4.46 and 2.44 for disease, as compared with 4.91 and 3.02, respectively, for the preceding year. The death rate from disease is the lowest on record in this office.

DISCHARGES FOR DISABILITY.

The discharges for disability numbered 1,007, the rate being 14.02, as compared with 16.84 for 1909, 18.48 for 1908, and 20.15 for 1907.

ADMISSION RATES FOR DISEASE.

The ratio for 1910 was 766.06 per 1,000 of mean strength; for the previous year, 865.92, and for the decade, 1,248.77. By reference to chart A below it will be seen that the health of the Army has constantly improved since the year 1899, when its admission rate for disease alone was 2,125.74.

TABLE NO. 4.—*Numerical view of the effect of disease and injury on United States troops serving at home and abroad in the year 1910, compared with corresponding data for the year 1909, by countries.—Absolute numbers.*

American troops (enlisted).		Mean strength.	Admitted.			Discharged on certificate of disability.			Died.			Total losses.			Noneffective from sickness.	
			Total.	Disease.	Injury.	Total.	Disease.	Injury.	Total.	Disease.	Injury.	Total.	Disease.	Injury.	Days treated.	Constantly noneffective.
United States	1910	55,680	50,070	39,841	10,229	851	763	88	246	128	118	1,097	891	206	690,036	1,890.51
	1909	57,124	58,516	46,943	11,573	1,081	974	107	277	170	107	1,358	1,144	214	827,723	2,267.73
Alaska	1910	1,081	489	346	143	9	7	2	3	3	.....	12	10	2	6,711	18.39
	1909	1,064	415	300	115	5	1	4	2	.....	2	7	1	6	6,299	17.26
Philippine Islands	1910	12,277	15,256	12,869	2,387	125	109	16	64	38	26	189	147	42	203,684	558.04
	1909	12,844	17,314	14,854	2,460	151	139	12	85	54	31	236	193	43	246,467	675.25
Hawaii	1910	1,220	1,232	890	342	21	21	.....	3	2	1	24	23	1	22,211	60.85
	1909	1,014	1,197	851	346	15	14	1	2	1	1	17	15	2	19,452	53.29
Army transports	1910	1,253	884	845	39	.....	.....	.....	4	4	.....	4	4	.....	15,427	42.27
	1909	1,669	1,076	1,000	76	.....	.....	.....	3	2	1	3	2	1	18,868	51.69
Total	**1910**	**71,534**	**67,940**	**54,799**	**13,141**	**1,007**	**901**	**106**	**320**	**175**	**145**	**1,327**	**1,076**	**251**	**938,210**	**2,570.44**
	1909	74,319	79,000	64,354	14,646	1,270	1,146	124	370	228	142	1,640	1,374	266	1,125,333	3,083.10
Regular Army, American troops, 1900 to 1909		66,487	973,855	830,270	143,585	14,961	13,220	1,741	6,369	4,298	2,071	21,330	17,518	3,812	.....	.....
Porto Rican regiment	1910	[1] 591	563	487	76	9	4	5	.....	.....	.....	9	4	5	6,899	18.90
	1909	567	674	617	57	6	5	1	7	4	3	13	9	4	8,906	24.40
Filipino Scouts	1910	5,093	4,462	3,809	653	36	32	4	23	19	4	59	51	8	48,342	132.44
	1909	5,369	5,036	4,462	574	80	74	4	41	34	7	121	108	11	68,806	188.51

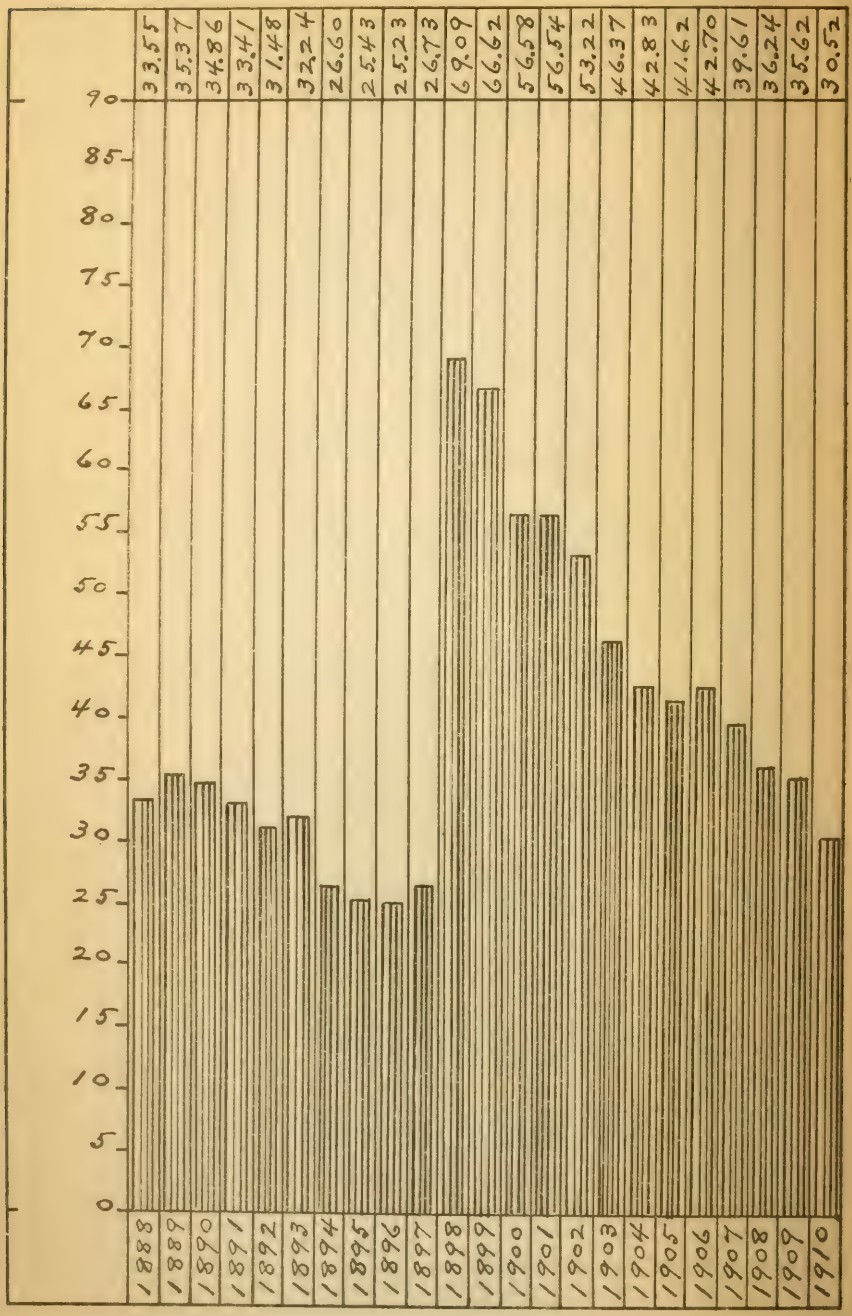
[1] Includes 23 American soldiers on duty in Porto Rico.

TABLE NO. 5.—*Numerical view of the effect of disease and injury on United States troops serving at home and abroad in the year 1910, compared with corresponding data for the year 1909, by countries.—Proportionate numbers.*

American troops (enlisted).	Mean strength.	Admitted.			Discharged on certificate of disability.			Died.			Total losses.			Constantly noneffective.	Days treated.	
		Total.	Disease.	Injury.	Total.	Disease.	Injury.	Total.	Disease.	Injury.	Total.	Disease.	Injury.		Each soldier.	Each case.
United States.....1910	55,680	899.25	715.54	183.71	15.28	13.70	1.58	4.42	2.30	2.12	19.70	16.00	3.70	33.95	12.39	13.78
1909	57,124	1,024.37	821.77	202.59	18.87	17.01	1.87	4.84	2.97	1.87	23.71	19.98	3.74	39.70	14.49	14.15
Alaska.....1910	1,081	452.36	320.07	132.28	7.96	6.19	1.77	2.65	2.65	.....	10.61	8.84	1.77	17.01	6.21	13.72
1909	1,064	390.04	281.95	108.08	4.36	.87	3.49	1.75	.....	1.75	6.11	.87	5.24	16.22	5.92	15.18
Philippine Islands.....1910	12,277	1,242.65	1,048.22	194.43	10.14	8.84	1.30	5.19	3.08	2.11	15.33	11.92	3.41	45.45	16.59	13.35
1909	12,844	1,348.02	1,156.49	191.53	11.43	10.52	.91	6.43	4.09	2.35	17.86	14.61	3.26	52.57	19.19	14.24
Hawaii.....1910	1,220	1,009.84	729.51	280.33	17.14	17.14	.....	2.45	1.63	.82	19.59	18.77	.82	49.88	18.21	18.03
1909	1,014	1,180.47	839.25	341.22	13.80	12.88	.92	1.84	.92	.92	15.64	13.80	1.84	52.56	19.18	16.25
Army transports.....1910	1,253	705.51	674.38	31.13	.....	.....	.....	2.81	2.81	.....	2.81	2.81	.....	33.73	12.31	17.45
1909	1,669	644.70	599.16	45.54	.....	.....	.....	1.45	.96	.48	1.45	.96	.48	30.97	11.30	17.53
Total.....1910.	[1] **71,534**	**949.76**	**766.06**	**183.70**	**14.02**	**12.55**	**1.48**	**4.46**	**2.44**	**2.02**	**18.48**	**14.99**	**3.50**	**35.93**	**13.12**	**13.84**
1909	74,319	1,062.99	865.92	197.07	16.84	15.20	1.64	4.91	3.02	1.88	21.75	18.22	3.52	44.48	15.14	14.24
Regular Army, American troops, 1900 to 1909.....	66,487	1,464.73	1,248.77	215.96	22.19	19.61	2.58	9.45	6.37	3.07	31.64	25.98	5.65	.....	.....	.....
Porto Rican regiment.....1910	591	952.62	824.03	128.60	15.23	6.77	8.46	.....	.....	.....	15.23	6.77	8.46	31.98	11.43	12.20
1909	567	1,188.71	1,088.18	100.53	10.58	8.82	1.76	12.35	7.05	5.29	22.93	15.87	7.05	43.03	15.71	13.21
Filipino Scouts.....1910	5,093	876.10	747.89	128.22	6.79	6.04	.75	4.34	3.58	.75	11.13	9.62	1.50	26.01	9.49	10.83
1909	5,369	937.98	831.07	106.91	14.44	13.72	.72	7.40	6.14	1.26	21.84	19.86	1.98	35.11	12.82	13.66

[1] Includes 23 American soldiers on duty in Porto Rico.

CHART A.—*Showing the total noneffective rate for disease, by years, since 1888, for the Army.*



EXTERNAL CAUSES.

There were 162 admissions for gunshot wounds, including 7 shot in action, one being an officer in the Filipino Scouts, with 53 deaths, including 2 killed in action and 20 suicides by gunshot wounds. Eighteen were discharged on account of gunshot wounds.

Wounds other than gunshot (contused, lacerated, incised, and punctured) caused 2,837 admissions, 1 death, and 24 discharges.

Drowning caused 30 deaths (1 suicidal); poisoning (acute) 16 deaths (7 suicidal).

There were 31 suicides, 16 homicides, and 2 deaths, "shot by sentry or guard."

There was 1 death from sunstroke and 1 from freezing.

NONEFFECTIVE RATES FOR DISEASE.

Chart A, giving the total noneffective rates for diseases for the two past decades, shows in a striking way the increase in sickness due to the exposures to tropical climates and conditions consequent upon the occupation of new territory during and since the Spanish-American War. It also shows a steady diminution in sickness after the first year of colonial expansion in 1898, with the rapid advance of our knowledge of tropical diseases and preventive medicine and the establishment of more sanitary conditions of living in our tropical possessions.

The progressive improvement since 1898 has been due chiefly to sanitary control of the infectious fevers—malarial, typhoid, and yellow fever. It would be even greater than at present if it had not been offset to a considerable extent by the formidable increase in the venereal diseases and tuberculosis.

DISCHARGES—INFLUENCE OF STATIONS ON TROOPS.

All discharges are now made in the United States, except for the Porto Rican regiment and the Filipino Scouts, but the discharges and deaths occurring in the United States of soldiers invalided home from foreign service and whose organizations were serving abroad at the time, have been credited to the country from which the soldier was invalided. There remains, however, a considerable number of deaths and discharges which can only be assigned to the place where they occur, though the diseases which led to these terminations were contracted abroad.

Regarding the comparative healthfulness of various countries in which the American troops were serving during the year, it will be noted in Table No. 5, that Alaska had, as usual, the lowest admission, discharge and noneffective rates; the United States, continental, the second lowest admission and noneffective rates; the Philippines the second lowest discharge rate and the highest admission and death rates; and Hawaii, the lowest death rate and the highest discharge and noneffective rates.

The charts on pages 21 and 22 give a summary of the health of the Army, by countries in which it was stationed during the year.

CHART B.—*Showing total death, discharge, and noneffective rates for disease, by years, since 1888, for the Army.*

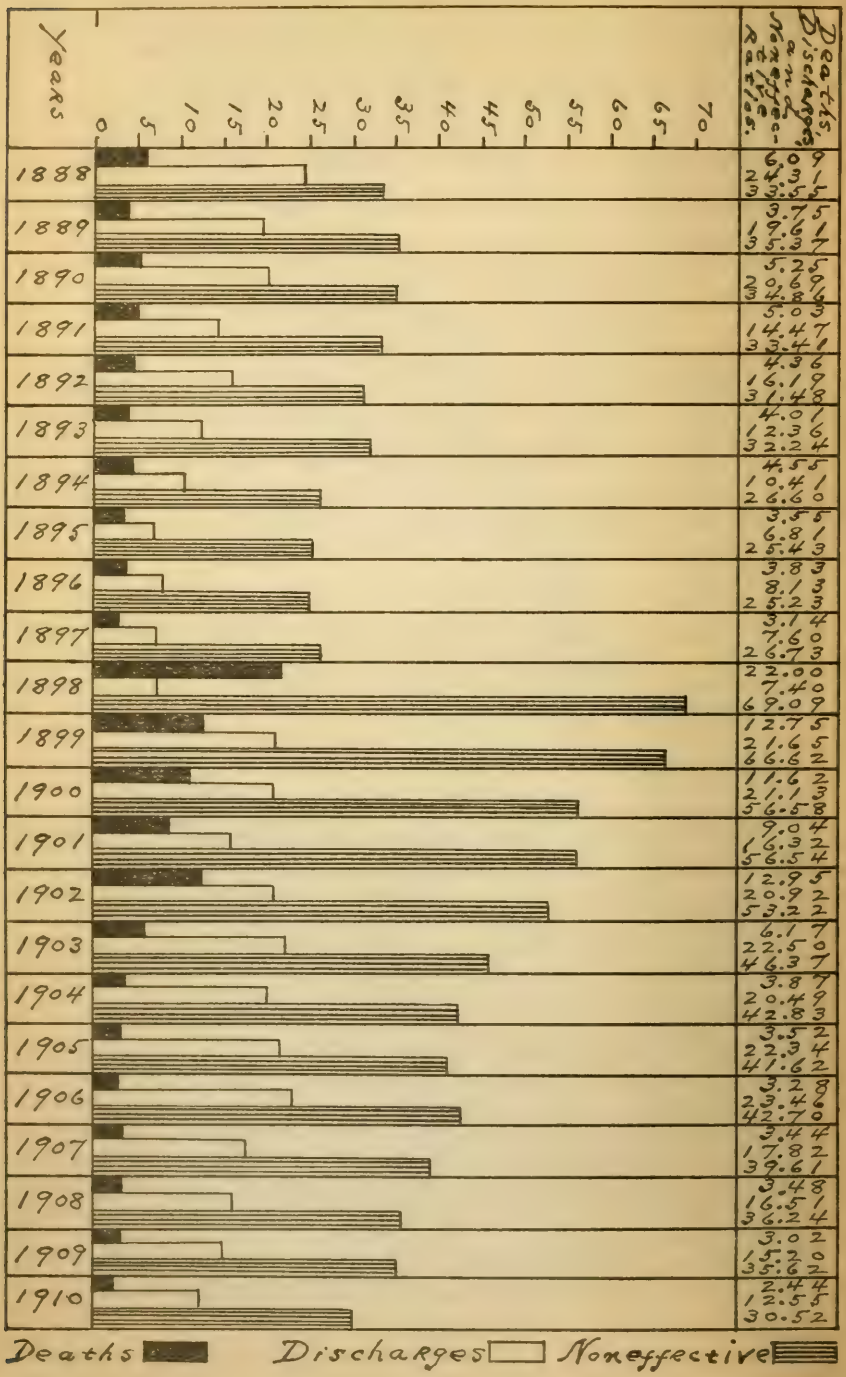


CHART C.—*Showing for the Army the rates for total losses, all causes, by years, since 1888.*

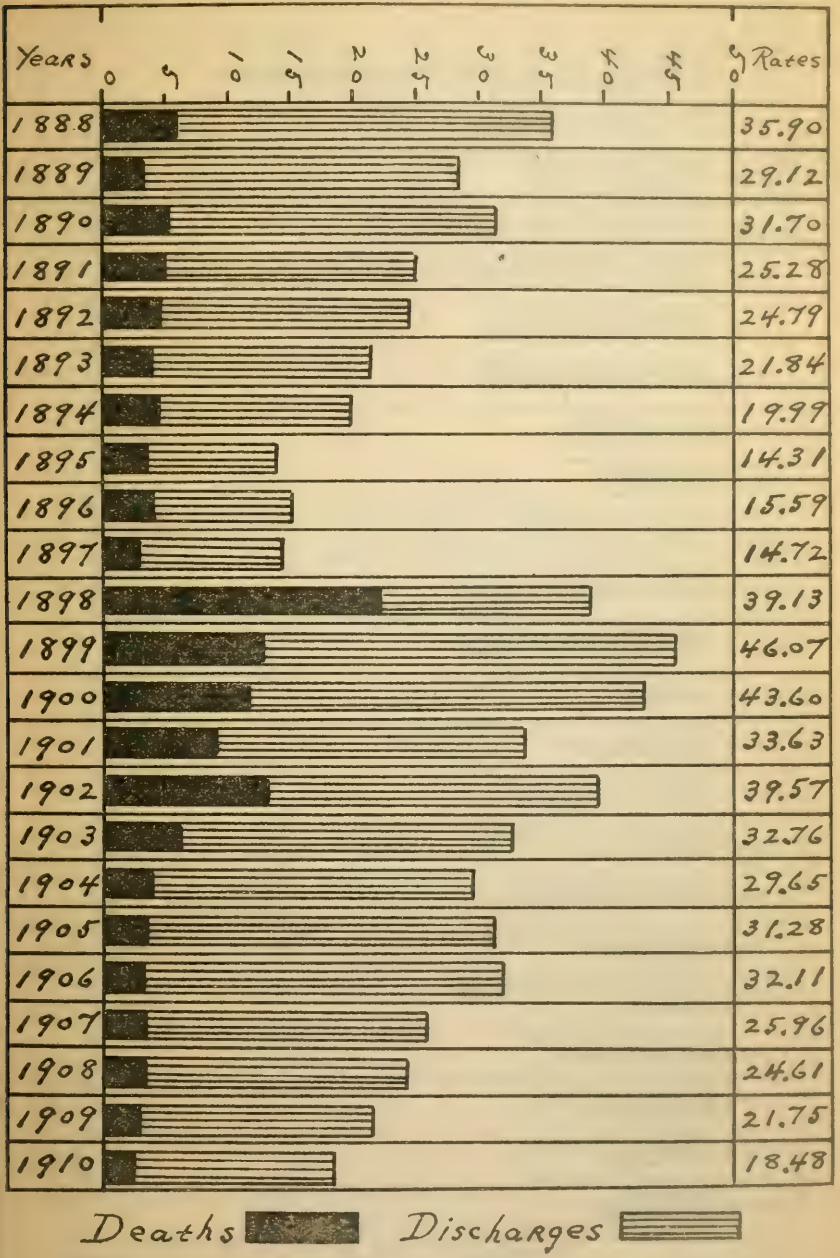


CHART D.—*Showing for the Army the death rates for the three diseases having the highest rates in 1910.*

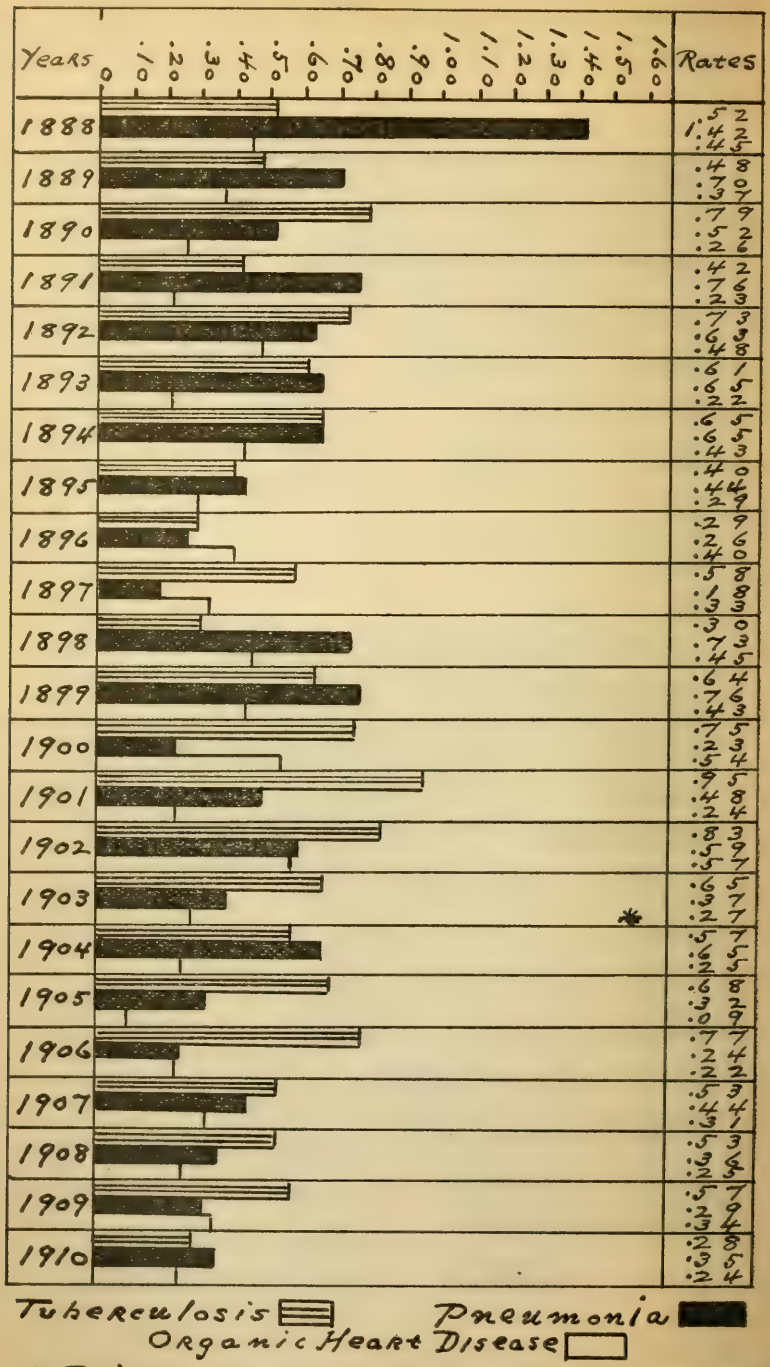
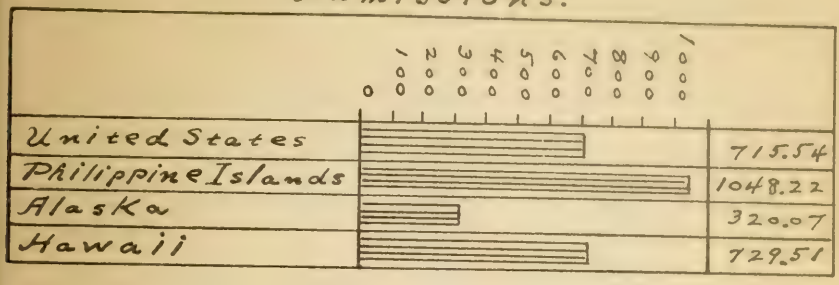
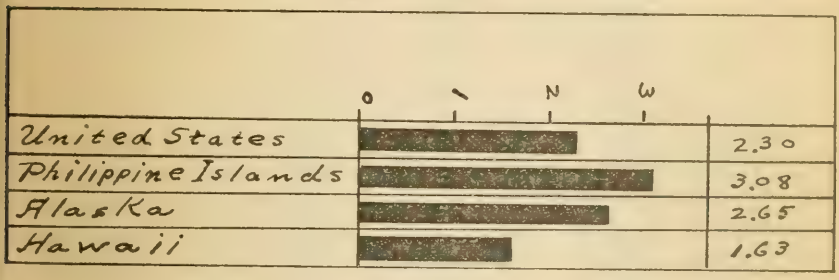
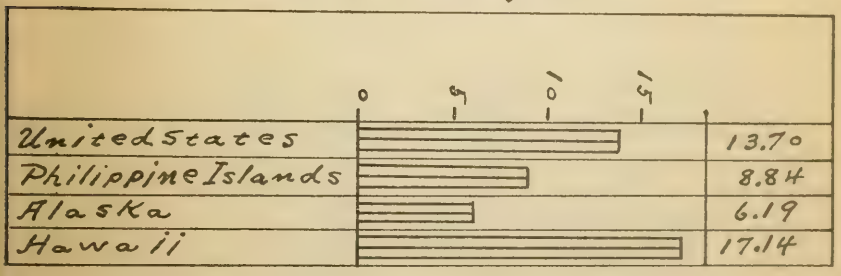


CHART E.—*Showing the relative admission, death, discharge, and noneffective rates per thousand of mean strength for disease, by countries, 1910.*







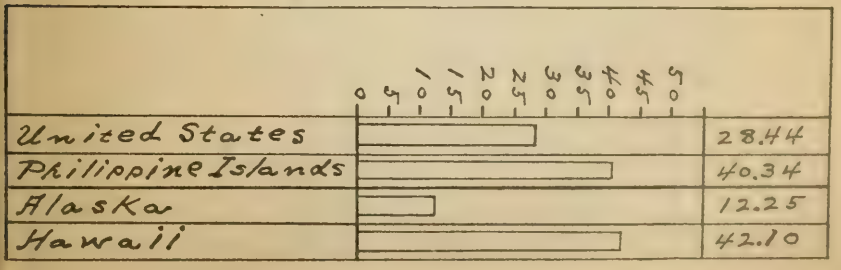
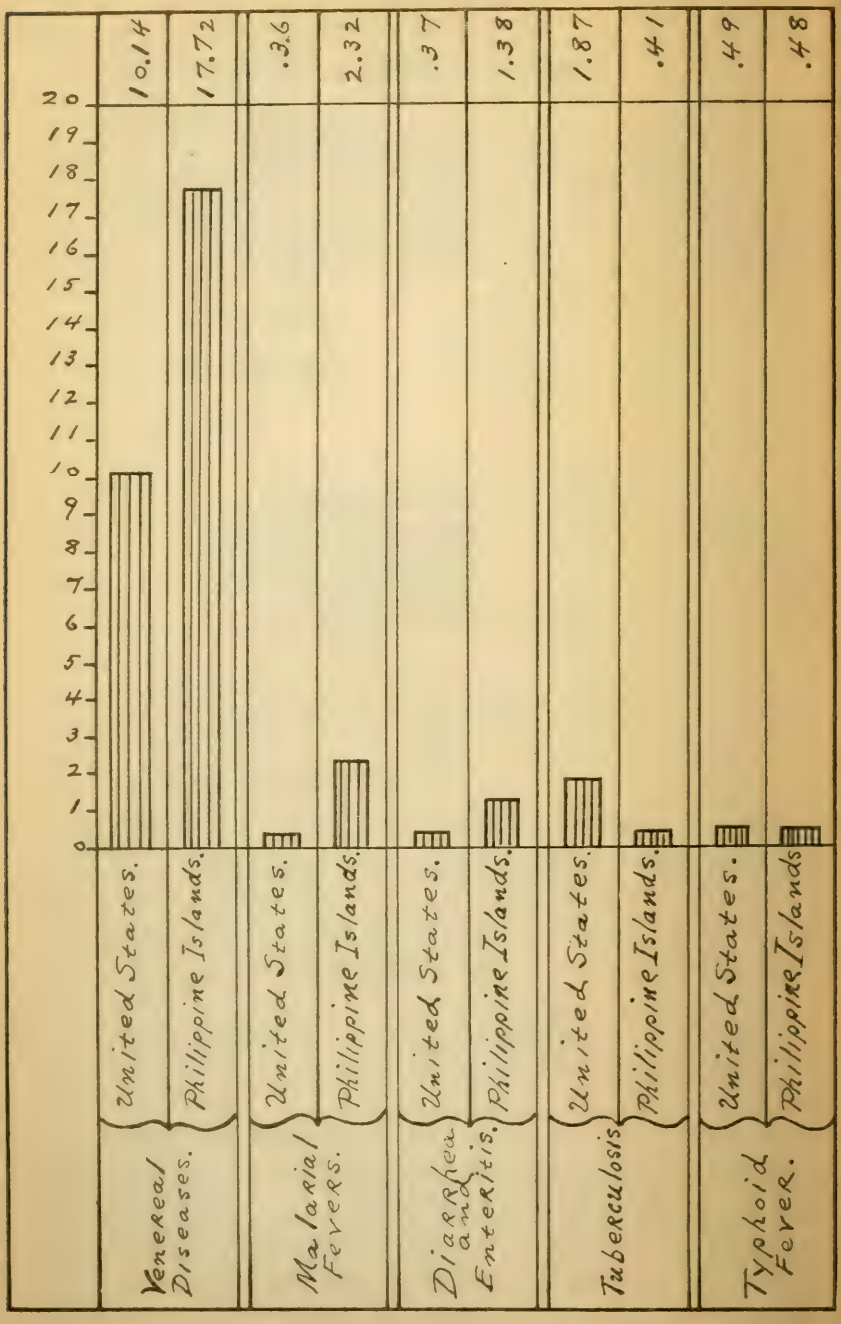


CHART F.—*Showing the relative noneffective ratios per thousand of mean strength of certain special diseases in the United States and the Philippine Islands, 1910.*



INFLUENCE OF ARM OF SERVICE.

(See International Tables III and VII.)

In these comparisons the enlisted men of the Ordnance Department and Signal Corps are not considered on account of their small number and the special character of their service.

The admission rate was highest for the Field Artillery and lowest for the Hospital Corps; the death rate was highest in the Engineers and lowest in the Field Artillery.

The following table shows the relative frequency of the occurrence of the more important diseases for the various arms of the service, the figure 1 indicating the highest ratio and 6 the lowest in each case for each arm:

TABLE NO. 6.—*The relative frequency of occurrence of certain important diseases by arms of service, United States Army, year 1910.*

Arms of service.	Most important diseases.											
	Venereal.	Tonsilitis and pharyngitis.	Diarrhea and enteritis.	Malaria.	Bronchitis.	Alcoholism.	Rheumatism, articular.	Dysentery.	Tuberculosis.	Typhoid fever.	Pneumonia.	Injuries.
Cavalry	2	4	5	1	2	5	6	5	5	5	6	1
Field Artillery	1	1	3	3	3	6	4	4	3	2	2	2
Coast Artillery	4	2	4	5	1	1	3	6	6	6	4	3
Infantry	3	6	1	4	5	3	1	2	4	3	5	5
Engineers	5	5	2	2	4	4	5	1	2	1	1	4
Hospital Corps	6	3	6	6	6	2	2	3	1	4	[illegible]	6

INFLUENCE OF RACE.

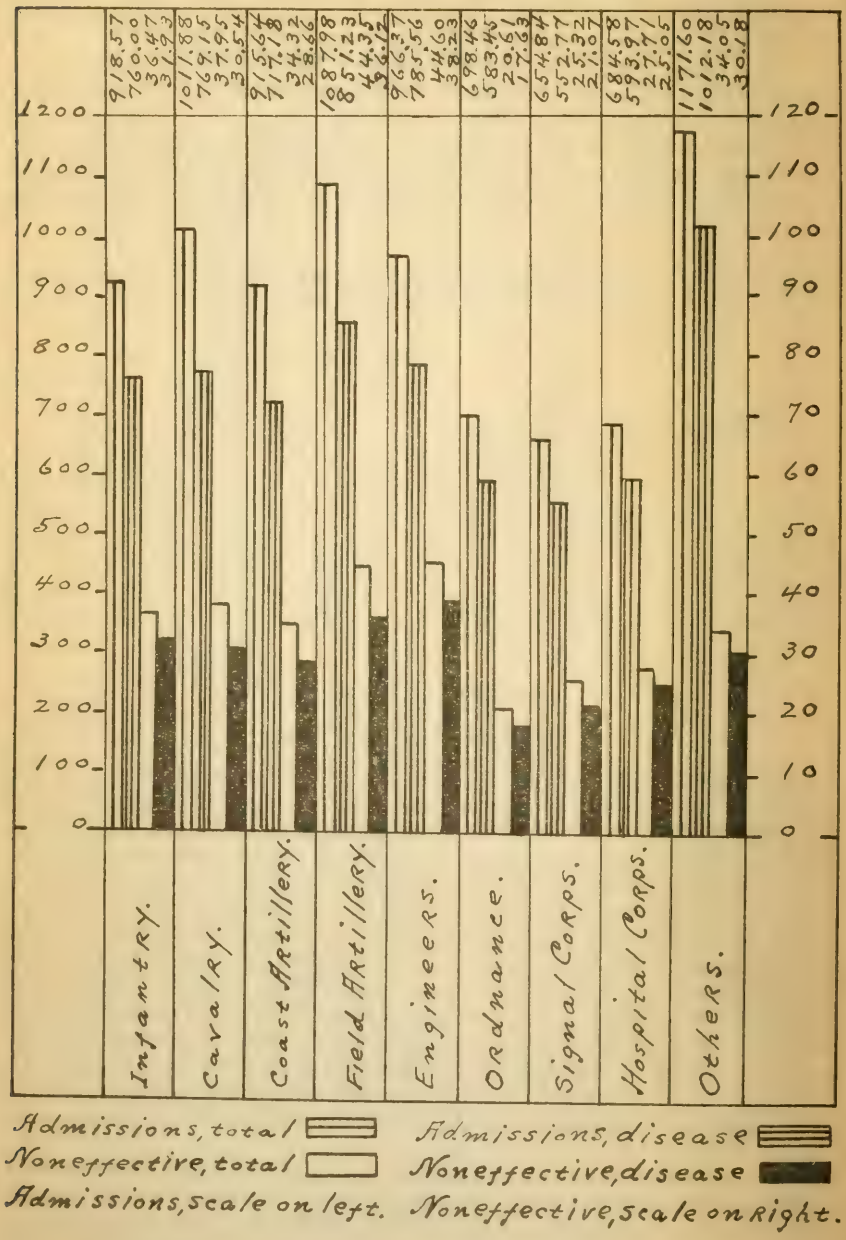
(See Tables 61, 62, and 64.)

The tables show that the white troops had the highest rate for admission to hospital, constant noneffective, and for the number of days treated in hospital; the Porto Rican troops for the discharges for disability; and the colored troops for deaths and total losses. The death rate for white troops was 4.33; colored, 7.37; and Filipino, 4.34. There was no death among the Porto Rican troops.

The admission rate for venereal disease was slightly higher for the white race than for the colored, while for the Filipino it was a little more than one-third of what it was for the white troops. Due to the fact that there were no colored troops serving in the Philippines during the year, the rate for all tropical diseases, such as malarial fevers and dysenteries, are higher for the white troops than for the colored. The rate for the Porto Rican troops for malarial fevers was about twice as high as that for the white, and that for the Filipino was eight times as high.

The rate for rheumatic affections and organic heart disease was higher for the colored than for the white. The rate for alcoholism was 24.74 for the white troops, 5.36 for the colored, 3.38 for the Porto Rican, and 0.39 for the Filipino. The rate for beriberi for the Filipino troops was 11, as compared with 103.93 for 1909. No case occurred among any of the other races.

CHART G.—*Showing the relative admission and noneffective ratio per thousand of mean strength, by arms of service, for the Army, 1910.*



The incidence of tuberculosis was greatest for the white, next for the Filipino, and lowest for the Porto Rican. The rate for typhoid fever and dysenteries was highest for the Porto Rican, next for the Filipino, and lowest for the colored.

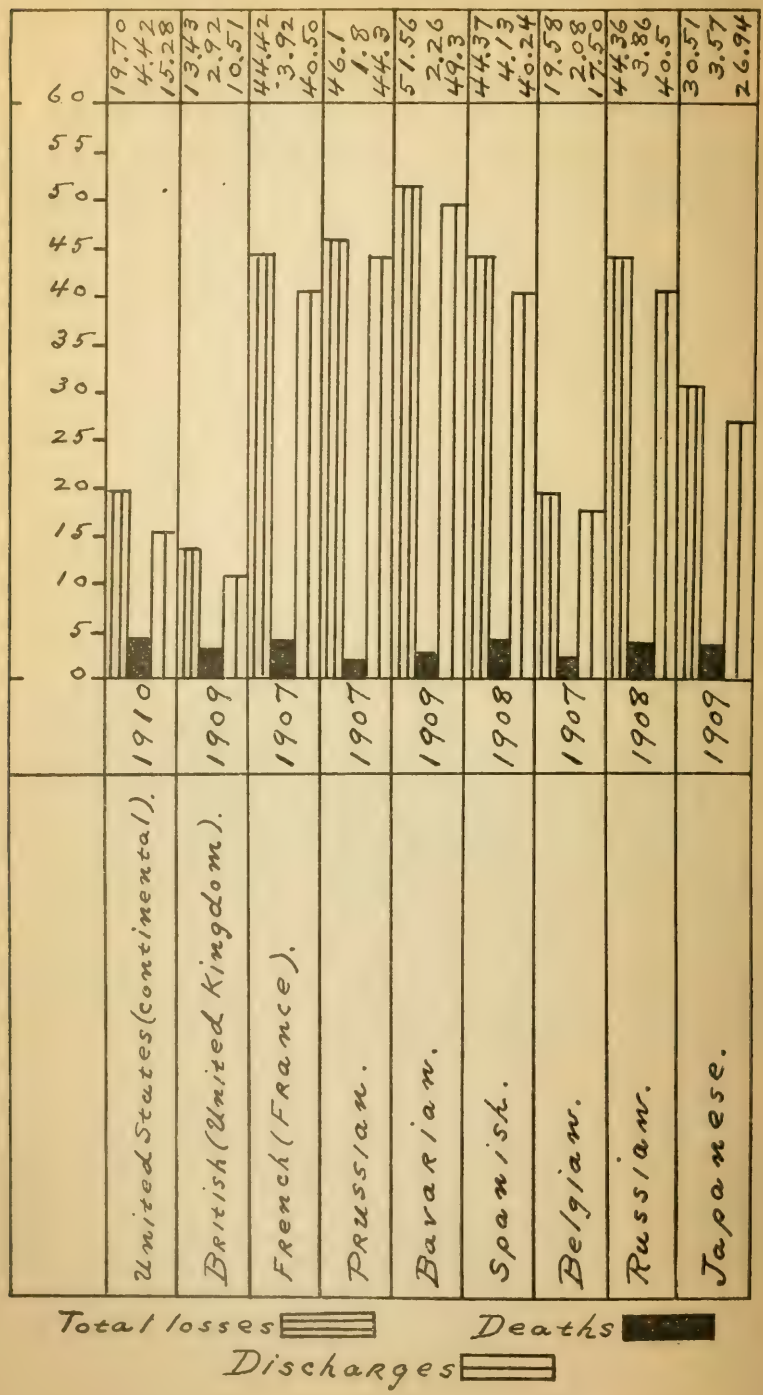
COMPARISON WITH FOREIGN ARMIES.

An effort is made in Chart H and Tables Nos. 65 and 66 to make a comparison of the data available in the annexes to the annual reports of the medical departments of the armies of a number of foreign governments. There are, however, so many factors which are peculiar to each country that an accurate comparison is impossible. For example, in most foreign services many of the minor ailments, which in the United States Army are treated in quarters and recorded with the same accuracy and care as in hospital cases, are not made of record in the medical reports.

These tables show that the admission rates for alcoholism and gonorrhea are much higher in the United States Army than in any foreign army included in the tables. The admission rate for syphilis is this year, as last, higher for the British Army than for our Army, being 33.8 per 1,000 as compared with 26.65. For malarial fevers the admission rate as compared with that for our Army is higher for British, Russian, and Japanese, slightly lower for the Spanish, and much lower for the Bavarian, Prussian, Belgian, and French. The admission rate for typhoid fever is higher for the Japanese, Russian, French, British, and Spanish. The death rate for typhoid is higher for the Japanese, Austro-Hungarian, Russian, French, and British, and just the same for the Spanish as for our Army. The admission rate for pneumonia, lobar, is higher for all the armies included in the table except for the Spanish. That for pulmonary tuberculosis is higher for the Spanish, French, Japanese, and Belgian. The death rate for pulmonary tuberculosis was higher for the Spanish, Russian, Belgian, French, and Austro-Hungarian. The admission rate for diseases of the heart was higher for all of the armies included in the table except for the Japanese. The admission rate for dysentery was higher for our Army than for any other except for the British. The rate for mental disease was higher for our Army than for any other.

It will be noticed that in these tables the figures for the American troops are for the year 1910; for the British, Bavarian, Austro-Hungarian, and Japanese for 1909; for the Spanish and Russian for 1908; and for the French, Prussian, and Belgian for 1907.

CHART H.—*Showing a comparison with foreign armies of the relative total loss, death and discharge ratios per thousand of mean strength.*



SURGICAL OPERATIONS.

On page 200 will be found Table No. 57 of the principal surgical operations performed by medical officers upon officers and enlisted men; operations upon families of officers and enlisted men and other civilians who are entitled to treatment at Army posts are not included. In 4,175 operations there were 32 failures, with 27 deaths. The anæsthetic used was ether 1,513 cases, chloroform 296, chloroform and ether 55, local 1,793, and none was required in 518 cases.

Seventeen operations were performed for abscess of the liver, with 1 death and 1 failure; 266 operations for appendicitis and appendicial abscess, with 6 deaths; 12 for cholecystitis, with 1 death; 177 for inguinal hernia, 1 for inguinal hernia recurrent, 13 for ventral hernia, 4 for femoral hernia, with no death; 45 for fistula in ano, with only 1 failure; and 304 for hemorrhoids without a failure.

TABLE NO. 7.—*Influence of disease in the Army, by length of service, age, and arms of service, for the year 1910.*

LENGTH OF SERVICE.

	Mean strength.	Admitted.	Discharged on certificate of disability.	Died.	Constantly non-effective.	Ratios per 1,000 of mean strength. Admitted.	Discharged on certificate of disability.	Died.	Constantly non-effective.
Under 1 year	7,861	10,347	251	15	348.04	1,316.24	31.88	1.91	44.27
1 to 2 years	14,640	11,142	222	14	489.91	761.07	15.12	.95	33.47
2 to 3 years	17,542	14,435	133	27	581.17	822.88	7.54	1.53	33.13
3 to 4 years	4,777	2,939	39	5	122.49	615.24	8.13	1.04	25.64
4 to 5 years	4,791	2,656	51	12	113.42	554.38	10.60	2.49	23.67
5 to 10 years	11,767	7,932	121	35	308.54	674.08	10.24	2.96	26.22
10 years and over	10,156	5,348	84	67	219.42	526.59	8.24	6.57	21.60
Total	71,534	54,799	901	175	2,182.99	766.06	12.55	2.44	30.52

AGE.

19 years and under	2,024	2,213	37	1	70.62	1,093.38	18.24	.49	34.89
20 to 24 years	28,267	26,893	371	42	1,038.97	951.39	13.08	1.48	36.76
25 to 29 years	20,451	14,508	267	37	602.36	709.40	13.00	1.80	29.45
30 to 34 years	10,879	6,078	128	23	250.70	558.69	11.72	2.11	23.04
35 to 39 years	5,240	2,710	59	28	114.59	517.17	11.21	5.32	21.87
40 to 44 years	2,820	1,429	23	24	59.28	506.74	8.12	8.47	21.02
45 to 49 years	1,323	673	9	13	31.17	508.69	6.77	9.78	23.56
50 years and over	530	295	7	7	15.30	556.60	13.16	13.16	28.87
Total	71,534	54,799	901	175	2,182.99	766.06	12.55	2.44	30.52

ARMS OF SERVICE.

Infantry	23,592	17,930	277	58	753.27	760.00	11.67	2.44	31.93
Cavalry	11,618	8,936	95	35	354.86	769.15	8.13	3.00	30.54
Field Artillery	4,853	4,131	61	8	175.27	851.23	12.52	1.64	36.12
Coast Artillery	18,185	13,042	199	32	521.17	717.18	10.93	1.76	28.66
Ordnance	713	416	3	6	12.57	583.45	4.21	8.42	17.63
Engineers	1,814	1,425	32	7	69.35	785.56	17.16	3.85	38.23
Signal Corps	1,156	639	6	4	24.36	552.77	5.13	3.42	21.07
Medical Department	3,443	2,045	80	10	86.23	593.97	23.18	2.90	25.05
All others	6,160	6,235	148	15	185.92	1,012.18	23.97	2.43	30.18
Total	71,534	54,799	901	175	2,182.99	766.06	12.55	2.44	30.52

RECRUITING.

The movement of recruits is shown in Table No. 8. Each recruit before enlistment was given a thorough examination by a medical officer of the Army. There were 25,133 examined as compared with 23,520 for the preceding year. Of each 1,000 examined 94.62 were rejected and 16.19 declined enlistment, as compared with 142.69 and 24.62 for 1909. Of each 1,000 examined by medical officers, 889.19 were accepted, as compared with 832.69 for 1909. Of the number enlisted, 492.54 per 1,000 were reenlistments and 396.65 were original enlistments, as compared with 363.65 and 469.04 for 1909.

TABLE NO. 8.—*Movement of recruits, white and colored, 1910.*

	White.		Colored.		Total.	
	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.
Examined by medical officers	23,788	1,000.00	1,345	1,000.00	25,133	1,000.00
Accepted by medical officers	21,094	886.75	1,254	932.34	22,348	889.19
By first enlistment	9,724	408.78	245	182.16	9,969	396.65
By all other enlistments	11,370	477.97	1,009	750.18	12,379	492.54
Rejected by medical officers	[1] 2,295	96.48	[1] 83	61.71	[1] 2,378	94.62
Declined	399	16.77	8	5.95	407	16.19

[1] Of this number 327 (313 white and 14 colored) were rejected for causes not physical.

This table shows only the applicants who had previously passed the scrutiny of the recruiting officers, and who were therefore picked men. The number of examinations and of rejections by recruiting officers is not known to this office, but was, of course, much larger. The present recruiting system operates in a highly satisfactory manner and furnishes to the Army recruits of far better quality than when they were examined under the former system of civilian physicians at the places of enlistment.

Table No. 9 shows the nativity of accepted recruits for the year:

TABLE NO. 9.—*Nativities of accepted recruits, American Army, 1910.*

Country of birth.	Accepted recruits, year 1910.	
	Number.	Ratio per 1,000 of total accepted.
United States:		
White	17,841	798.33
Colored	1,254	56.11
Total native born	19,095	854.44
Germany	708	31.68
Ireland	562	25.1
Russia	389	17.4
Austria	331	14.8
England	282	12.6
Canada	209	9.3
Scandinavia	186	8.3
Hungary	134	6.0
Italy	106	4.7
Denmark	87	3.8

TABLE No. 9.—*Nativities of accepted recruits, American Army, 1910*—Continued.

Country of birth.	Accepted recruits, year 1910.	
	Number.	Ratio per 1,000 of total accepted.
Switzerland	40	1.79
Scotland	70	3.13
Holland	43	1.92
France	23	1.03
Others	83	3.71
Total foreign born	3,253	145.56
Grand total	22,348	1,000.00

The number of foreign born recruits is more than last year but less than for 1908, being 145.56 per 1,000 for 1910, 140.46 for 1909, and 149.09 for 1908. The most marked increase in the proportion of recruits was from Russia, Hungary, and Denmark.

The following tables have been carefully compiled and are of interest, as they show the state of physical development of the men admitted to the Army during the year. The ages of all the recruits accepted, white and colored, and the proportion at each age per 1,000 are shown in this statement:

TABLE No. 10.—*Ages of recruits, white and colored, and the proportion at each, per 1,000 accepted.*

Ages.	White.		Colored.		Total.	
	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.
18 years and under	943	44.70	16	12.76	959	42.91
19 years	637	30.20	8	6.38	645	28.86
20 years	366	17.35	5	3.99	371	16.60
21 years	3,499	165.88	71	56.62	3,570	159.75
22 years	1,741	82.54	49	39.07	1,790	80.10
23 years	1,094	51.86	40	31.90	1,134	50.74
24 years	1,869	88.60	87	69.38	1,956	87.52
25 years	1,273	60.35	79	63.00	1,352	60.50
26 years	1,031	48.88	83	66.19	1,114	49.85
27 years	1,182	56.03	83	66.19	1,265	56.61
28 years	939	44.52	60	47.85	999	44.70
29 years	732	34.70	65	51.83	797	35.67
30 years	806	38.21	87	69.38	893	39.96
31 years	646	30.62	61	48.64	707	31.64
32 years	512	24.27	57	45.46	569	25.46
33 years	527	24.98	62	49.44	589	26.36
34 years	463	21.95	53	42.26	516	23.09
35 years	333	15.79	34	27.11	367	16.42
36 years	322	15.26	37	29.51	359	16.06
37 years	288	13.65	29	23.12	317	14.19
38 years	250	11.85	29	23.12	279	12.48
39 years	235	11.14	15	11.96	250	11.19
40 years and over	1,406	66.64	144	114.83	1,550	69.36
Total	21,094	1,000.00	1,254	1,000.00	22,348	1,000.00

The proportion of accepted recruits under the age of 24 has noticeably diminished in comparison with last year, being due undoubtedly to the much larger proportion of reenlistments.

The series of tables which follow show separately for each race the height of accepted recruits for the year and the proportion of each height per 1,000; also, in absolute and proportional numbers, the relation of height to age:

TABLE No. 11.—*Relation of height to age.*

ABSOLUTE NUMBERS—WHITE TROOPS.

Heights.	Age.									Total.
	18 years and under.	19 years.	20 years.	21 years.	22 years.	23 years.	24 years.	25 years.	26 years and over.	
5 feet 1 inch and under	.....	.....	.....	.....	.....	.....	.....	.....	5	5
5 feet 2 inches	.....	.....	1	.....	.....	1	1	2	11	16
5 feet 3 inches	6	5	1	31	13	7	11	13	100	187
5 feet 4 inches	83	46	36	231	110	73	121	78	605	1,383
5 feet 5 inches	132	104	40	387	221	113	194	129	1,072	2,392
5 feet 6 inches	177	104	58	485	246	180	280	181	1,473	3,184
5 feet 7 inches	172	128	60	616	310	192	291	218	1,595	3,582
5 feet 8 inches	150	102	62	604	259	177	338	209	1,585	3,486
5 feet 9 inches	116	67	43	484	245	144	253	186	1,354	2,892
5 feet 10 inches	60	31	30	354	180	93	171	113	889	1,921
5 feet 11 inches	24	29	20	160	78	65	106	67	479	1,028
6 feet	12	17	11	98	57	27	69	50	332	673
6 feet 1 inch	6	2	4	36	14	15	25	14	104	220
6 feet 2 inches and over	5	2	.....	13	8	7	9	13	68	125
Total	943	637	366	3,499	1,741	1,094	1,869	1,273	9,672	21,094

PROPORTIONATE NUMBERS—WHITE TROOPS.

5 feet 1 inch and under	.....	.....	.....	.....	.....	.....	.....	.....	0.52	0.24
5 feet 2 inches	.....	.....	2.73	.....	.....	0.91	0.54	1.57	1.14	.76
5 feet 3 inches	6.36	7.85	2.73	8.86	7.47	6.40	5.89	10.21	10.34	8.87
5 feet 4 inches	88.02	72.22	98.37	66.02	63.18	66.73	64.74	61.27	62.55	65.56
5 feet 5 inches	139.98	163.27	109.29	110.60	126.94	103.29	103.80	101.34	110.84	113.40
5 feet 6 inches	187.70	163.27	158.47	138.61	141.30	164.53	149.81	142.18	152.30	150.94
5 feet 7 inches	182.40	200.94	163.93	176.03	178.06	175.50	155.70	171.25	164.92	169.81
5 feet 8 inches	159.07	160.13	169.40	172.62	148.76	161.79	180.84	164.18	163.88	165.26
5 feet 9 inches	123.01	105.18	117.49	138.32	140.72	131.63	135.37	146.12	140.00	137.10
5 feet 10 inches	63.63	48.67	81.97	101.17	103.39	85.01	91.50	88.76	91.92	91.07
5 feet 11 inches	25.45	45.53	54.64	45.73	44.80	59.42	56.71	52.63	49.53	48.73
6 feet	12.73	26.69	30.05	28.01	32.74	24.68	36.92	39.28	34.33	31.90
6 feet 1 inch	6.36	3.14	10.93	10.29	8.04	13.71	13.38	11.00	10.75	10.43
6 feet 2 inches and over	5.30	3.14	.....	3.72	4.60	6.40	4.82	10.21	7.03	5.93
Total	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00

TABLE NO. 12.—*Relation of height to age.*

ABSOLUTE NUMBERS—COLORED TROOPS.

Heights.	Age.									Total.
	18 years and under.	19 years.	20 years.	21 years.	22 years.	23 years.	24 years.	25 years.	26 years and over.	
5 feet 1 inch and under										
5 feet 2 inches				1					1	2
5 feet 3 inches	1				2				10	13
5 feet 4 inches	2			3	3	2	7	4	45	66
5 feet 5 inches	1	1	2	10	4	4	11	6	104	143
5 feet 6 inches	4	2	1	9	3	7	21	17	133	197
5 feet 7 inches	5			12	11	4	12	13	189	246
5 feet 8 inches	1	1	1	15	6	10	10	15	151	210
5 feet 9 inches		2		13	8	5	13	12	104	157
5 feet 10 inches	1	1	1	4	9	3	5	4	87	115
5 feet 11 inches				1	1	5	4	1	28	40
6 feet	1			2	1		3	6	26	39
6 feet 1 inch		1		1				1	16	19
6 feet 2 inches and over					1		1		5	7
Total	16	8	5	71	49	40	87	79	899	1,254

PROPORTIONATE NUMBERS—COLORED TROOPS.

5 feet 1 inch and under										
5 feet 2 inches				14.09					1.11	1.59
5 feet 3 inches	62.50				40.82				11.12	10.37
5 feet 4 inches	125.00			42.25	61.22	50.00	80.46	50.63	50.06	52.63
5 feet 5 inches	62.50	125.00	400.00	140.85	81.63	100.00	126.44	75.95	115.68	114.04
5 feet 6 inches	250.00	250.00	200.00	126.76	61.22	175.00	241.38	215.19	147.94	157.10
5 feet 7 inches	312.50			169.01	224.49	100.00	137.93	164.56	210.23	196.17
5 feet 8 inches	62.50	125.00	200.00	211.27	122.45	250.00	114.94	189.87	167.96	167.46
5 feet 9 inches		250.00		183.10	163.27	125.00	149.43	151.90	115.68	125.20
5 feet 10 inches	62.50	125.00	200.00	56.34	183.67	75.00	57.47	50.63	96.77	91.71
5 feet 11 inches				14.09	20.41	125.00	45.98	12.66	31.14	31.90
6 feet	62.50			28.17	20.41		34.48	75.95	28.92	31.10
6 feet 1 inch		125.00		14.09				12.66	17.80	15.15
6 feet 2 inches and over					20.41		11.49		5.56	5.58
Total	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00

It will be noted that 49.04 per cent of the white recruits were 5 feet 8 inches or over, and 0.987 per cent were under the minimum height of 5 feet 4 inches, as compared with 48.74 and 1.06 for the previous year.

For colored troops 46.81 were 5 feet 8 inches or over, and 1.2 per cent were under the minimum height, as compared with 45.48 and 0.09.

The average height for white recruits was 5 feet 7.56 inches; for colored, 5 feet 7.51 inches.

The following tables show separately for each race the weight of accepted recruits and the proportion of each weight per 1,000; also the relation of weight to age in both absolute and proportional numbers.

TABLE NO. 13.—*Relation of weight to age.*

ABSOLUTE NUMBERS—WHITE TROOPS.

Weights.	Age.									Total.
	18 years and under.	19 years.	20 years.	21 years.	22 years.	23 years.	24 years.	25 years.	26 years and over.	
119 pounds and under	31	13	5	23	15	9	21	12	210	339
120 to 124 pounds	130	81	41	251	92	59	86	61	396	1,197
125 to 129 pounds	174	115	56	401	193	119	135	89	657	1,939
130 to 134 pounds	174	125	59	493	243	134	225	148	944	2,545
135 to 139 pounds	152	93	51	574	250	159	244	171	1,129	2,823
140 to 144 pounds	97	78	49	583	229	160	266	191	1,162	2,815
145 to 149 pounds	90	72	40	421	233	132	282	175	1,084	2,529
150 to 154 pounds	42	25	26	304	187	101	211	128	978	2,002
155 to 159 pounds	19	11	17	173	114	82	137	92	736	1,381
160 to 164 pounds	16	11	11	128	66	58	99	81	597	1,067
165 to 169 pounds	9	6	7	63	64	36	69	49	477	780
170 to 174 pounds	5	.....	1	39	21	17	41	28	317	469
175 to 179 pounds	1	4	2	19	15	10	23	20	255	349
180 pounds and over	3	3	1	27	19	18	30	28	730	859
Total	943	637	366	3,499	1,741	1,094	1,869	1,273	9,672	21,094

PROPORTIONATE NUMBERS—WHITE TROOPS.

119 pounds and under	32.88	20.41	13.66	6.57	8.62	8.23	11.24	9.43	21.71	16.07
120 to 124 pounds	137.86	127.16	112.02	71.73	52.84	53.93	46.01	47.92	40.95	56.74
125 to 129 pounds	184.52	180.54	153.00	114.60	110.86	108.77	72.23	69.91	67.93	91.92
130 to 134 pounds	184.52	196.23	161.21	140.90	139.58	122.49	120.39	116.26	97.61	120.65
135 to 139 pounds	161.19	146.00	139.35	164.05	143.60	145.34	130.55	134.33	116.73	133.83
140 to 144 pounds	102.86	122.45	133.88	166.61	131.53	146.25	142.32	150.04	120.14	133.45
145 to 149 pounds	95.44	113.03	109.29	120.32	133.83	120.66	150.88	137.47	112.08	119.89
150 to 154 pounds	44.54	39.25	71.04	86.88	107.41	92.32	112.90	100.55	101.12	94.91
155 to 159 pounds	20.15	17.27	46.45	49.44	65.48	74.96	73.30	72.27	76.11	65.47
160 to 164 pounds	16.97	17.27	30.05	36.58	37.91	53.02	52.97	63.63	61.73	50.58
165 to 169 pounds	9.54	9.42	19.13	18.00	36.76	32.91	36.92	38.49	49.32	36.98
170 to 174 pounds	5.30	.....	2.73	11.15	12.06	15.54	21.94	22.00	32.78	22.23
175 to 179 pounds	1.06	6.28	5.46	5.43	8.62	9.14	12.31	15.71	26.37	16.54
180 pounds and over	3.18	4.71	2.73	7.72	10.91	16.45	16.05	22.00	75.48	40.72
Total	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00

TABLE NO. 14.—*Relation of weight to age.*

ABSOLUTE NUMBERS—COLORED TROOPS.

Weights.	Age.									Total
	18 years and under.	19 years.	20 years.	21 years.	22 years.	23 years.	24 years.	25 years.	26 years and over.	
119 pounds and under	1	.....	.....	.....	1	.....	.....	.....	4	6
120 to 124 pounds	2	2	.....	4	.....	2	.....	1	14	25
125 to 129 pounds	3	1	1	6	6	1	6	5	39	68
130 to 134 pounds	1	1	.....	8	8	2	10	12	59	101
135 to 139 pounds	2	2	2	9	3	3	13	9	88	131
140 to 144 pounds	2	1	1	7	6	11	12	7	122	169
145 to 149 pounds	2	.....	1	10	6	5	12	6	106	148
150 to 154 pounds	.....	.....	.....	11	7	3	12	14	79	126
155 to 159 pounds	1	.....	.....	10	5	7	7	8	100	138
160 to 164 pounds	2	1	.....	2	2	.....	4	5	79	95
165 to 169 pounds	.....	.....	.....	3	2	2	7	5	59	78
170 to 174 pounds	.....	.....	.....	1	2	3	2	1	32	41
175 to 179 pounds	.....	.....	.....	.....	1	.....	1	2	30	34
180 pounds and over	.....	.....	.....	.....	.....	1	1	4	88	94
Total	16	8	5	71	49	40	87	79	899	1,254

PROPORTIONATE NUMBERS—COLORED TROOPS.

119 pounds and under	62.50	.....	.....	.....	20.41	.....	.....	.....	4.45	4.78
120 to 124 pounds	125.00	250.00	.....	56.34	.....	50.00	.....	12.66	15.57	19.94
125 to 129 poubds	187.50	125.00	200.00	84.51	122.45	25.00	68.97	63.29	43.38	54.23
130 to 134 pounds	62.50	125.00	.....	112.68	163.27	50.00	114.94	151.90	65.63	80.54
135 to 139 pounds	125.00	250.00	400.00	126.76	61.22	75.00	149.43	113.92	97.88	104.47
140 to 144 pounds	125.00	125.00	200.00	98.59	122.45	275.00	137.93	88.60	135.71	134.77
145 to 149 pounds	125.00	.....	200.00	140.85	122.45	125.00	137.93	75.95	117.91	118.02
150 to 154 pounds	.....	.....	.....	154.93	142.86	75.00	137.93	177.20	87.88	100.48
155 to 159 pounds	62.50	.....	.....	140.85	102.04	175.00	80.46	101.27	111.23	110.05
160 to 164 pounds	125.00	125.00	.....	28.17	40.82	.....	45.98	63.29	87.88	75.76
165 to 169 pounds	.....	.....	.....	42.25	40.82	50.00	80.46	63.29	65.63	62.20
170 to 174 pounds	.....	.....	.....	14.09	40.82	75.00	22.99	12.66	35.59	32.70
175 to 179 pounds	.....	.....	.....	.....	20.41	.....	11.49	25.32	33.37	27.11
180 pounds and over	.....	.....	.....	.....	.....	25.00	11.49	50.63	97.88	74.96
Total	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00

The average weight of white recruits was 144.5 pounds; of colored recruits, 150.44 pounds.

Of the white troops, 58.07 per cent weighed 140 pounds or over, while 1.61 per cent weighed less than the minimum, 120 pounds, as compared with 57.94 and 1.29 for 1909. Of the colored troops, 73.6 per cent weighed 140 pounds or over, while 0.478 per cent weighed less than the minimum, 120 pounds, compared with 64.61 and 0.65 for 1909.

The next tables show separately for each race the chest measurement of accepted recruits and the proportion of each measurement per 1,000; also the chest measurement in relation to age in both absolute and proportional numbers.

TABLE No. 15.—*Relation of chest measurement to age.*

ABSOLUTE NUMBERS—WHITE TROOPS.

Chest measurements.	Age.									Total.
	18 years and under.	19 years.	20 years.	21 years.	22 years.	23 years.	24 years.	25 years.	26 years and over.	
30 inches and under.	84	46	31	137	49	24	41	19	175	606
31 inches	208	122	59	427	189	105	144	104	559	1,917
32 inches	317	190	94	882	366	217	363	213	1,419	4,061
33 inches	187	132	87	852	426	253	460	302	1,865	4,564
34 inches	91	101	50	642	372	233	395	281	1,908	4,073
35 inches	44	31	27	331	201	146	260	198	1,445	2,683
36 inches	12	11	13	153	96	79	135	97	1,031	1,627
37 inches	.....	4	5	61	24	28	50	38	558	768
38 inches	.....	.....	.....	11	14	6	17	12	324	384
39 inches and over	.....	.....	.....	3	4	3	4	9	388	411
Total	943	637	366	3,499	1,741	1,094	1,869	1,273	9,672	21,094

PROPORTIONATE NUMBERS—WHITE TROOPS.

30 inches and under.	89.08	72.22	84.70	39.15	28.14	21.94	21.94	14.93	18.09	28.73
31 inches	220.57	191.53	161.20	122.03	108.56	95.98	77.05	81.70	57.80	90.88
32 inches	336.16	298.27	256.83	252.07	210.22	198.36	194.22	167.32	146.72	192.52
33 inches	198.31	207.22	237.70	243.50	244.69	231.26	246.12	237.24	192.83	216.37
34 inches	96.50	158.56	136.61	183.48	213.67	213.00	211.34	220.74	197.28	193.09
35 inches	46.66	48.67	73.77	94.60	115.45	133.46	139.11	155.54	149.40	127.19
36 inches	12.73	17.27	35.52	43.73	55.14	72.21	72.23	76.20	106.60	77.12
37 inches	.....	6.28	13.66	17.43	13.79	25.59	26.75	29.85	57.70	36.41
38 inches	.....	.....	.....	3.14	8.04	5.48	9.10	9.43	33.50	18.20
39 inches and over	.....	.....	.....	.86	2.30	2.74	2.14	7.07	40.12	19.48
Total	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00

TABLE No. 16.—*Relation of chest measurement to age.*

ABSOLUTE NUMBERS—COLORED TROOPS.

Chest measurements.	Age.									Total.
	18 years and under.	19 years.	20 years.	21 years.	22 years.	23 years.	24 years.	25 years.	26 years and over.	
30 inches and under.	2	1	.....	7	1	.....	.....	1	9	21
31 inches	3	3	2	7	9	2	8	10	55	99
32 inches	4	4	1	17	10	10	26	19	116	207
33 inches	5	.....	2	20	11	10	21	18	180	267
34 inches	2	.....	.....	15	9	11	16	15	188	256
35 inches	.....	.....	.....	4	7	4	9	6	143	173
36 inches	.....	.....	.....	1	2	.....	6	7	91	107
37 inches	.....	.....	.....	.....	.....	3	1	3	48	55
38 inches	.....	.....	.....	.....	.....	.....	.....	.....	33	33
39 inches and over	.....	.....	.....	.....	.....	.....	.....	.....	36	36
Total	16	8	5	71	49	40	87	79	899	1,254

PROPORTIONATE NUMBERS—COLORED TROOPS.

30 inches and under.	125.00	125.00	.....	98.59	20.41	.....	.....	12.66	10.01	16.75
31 inches	187.50	375.00	400.00	98.59	183.67	50.00	91.95	126.58	61.18	78.95
32 inches	250.00	500.00	200.00	239.44	204.08	250.00	298.85	240.50	129.03	165.07
33 inches	312.50	.....	400.00	281.70	224.49	250.00	241.38	227.85	200.22	212.92
34 inches	125.00	.....	.....	211.27	183.67	275.00	183.91	189.87	209.12	204.15
35 inches	.....	.....	.....	56.34	142.86	100.00	103.45	75.95	159.07	137.96
36 inches	.....	.....	.....	14.09	40.82	.....	68.97	88.60	101.22	85.33
37 inches	.....	.....	.....	.....	.....	75.00	11.49	37.97	53.39	43.86
38 inches	.....	.....	.....	.....	.....	.....	.....	.....	36.71	26.32
39 inches and over	.....	.....	.....	.....	.....	.....	.....	.....	40.04	28.71
Total	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00

The chest measurement of 47.15 per cent of the white recruits was 34 inches and over; and 2.87 per cent were 30 inches and under, as compared with 47.77 and 2.54 per cent, respectively, for the preceding year. The chest measurements for colored recruits show 52.63 per cent 34 inches or over, and 1.67 per cent 30 inches and under, compared with 53.49 and 1.68 for 1909.

The following table shows the causes of rejection among white and colored troops examined for enlistment during the year 1910, with the ratios per 1,000 rejected:

TABLE No. 17.—*Causes of rejection by medical officers of the Army of candidates examined for enlistment, year 1910.*

Causes of rejection.	Total.		White.						Colored.	
			Native born.		Foreign born.		Total.			
	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.
Heart disease	277	116.48	243	105.88	23	10.02	266	115.90	11	132.53
Venereal diseases	271	113.96	218	94.99	34	14.81	252	109.80	19	228.92
Diseases of the eye, including defects of vision	199	83.68	183	79.74	14	6.10	197	85.84	2	24.10
Diseases of the ear, including defects of hearing	190	79.90	160	69.71	30	13.07	190	82.78	.....	.....
Diseases of the organs of locomotion, except spinal curvature	101	42.77	88	38.34	7	3.05	95	41.39	6	72.29
Flat feet	96	40.37	75	32.68	14	6.10	89	38.78	7	84.34
Underweight	92	38.69	85	37.04	5	2.18	90	39.22	2	24.10
Alcoholism	87	36.58	77	33.55	10	4.36	87	37.91	.....	.....
Defective teeth	85	35.74	69	30.07	16	6.97	85	37.04	.....	.....
Diseases of the respiratory system	67	28.17	55	23.97	10	4.36	65	28.32	2	24.10
Tuberculosis	66	27.75	57	24.84	5	2.18	62	27.02	4	48.19
Defects of development, except as shown in detail	66	27.75	58	25.27	7	3.05	65	28.32	1	12.05
Hernia	59	24.81	52	22.66	4	1.74	56	24.40	3	36.14
Diseases of the skin	52	21.87	47	20.48	4	1.74	51	22.22	1	12.05
Diseases of the genito-urinary system, nonvenereal	46	19.34	41	17.86	4	1.74	45	19.61	1	12.05
Diseases of the nervous system, except as shown in detail	38	15.98	31	13.51	4	1.74	35	15.25	3	36.14
Varicose veins	34	14.30	25	10.89	9	3.92	34	14.81	.....	.....
General diseases	32	13.46	27	11.76	4	1.74	31	13.51	1	12.05
Weakness of mind	32	13.46	27	11.76	3	1.31	30	13.07	2	24.10
Curvature of the spine	21	8.83	18	7.84	3	1.31	21	9.15	.....	.....
Diseases of the digestive system, except as shown in detail	19	7.99	16	6.97	1	.44	17	7.41	2	24.10
Chest development insufficient	13	5.47	9	3.92	3	1.31	12	5.23	1	12.05
Diseases of the circulatory system, except as shown in detail	10	4.21	10	4.36	.....	.....	10	4.36	.....	.....
Underheight	10	4.21	9	3.92	1	.44	10	4.36	.....	.....
Overweight and obesity	9	3.78	9	3.92	.....	.....	9	3.92	.....	.....
Hemorrhoids	8	3.36	7	3.05	1	.44	8	3.49	.....	.....
Physical debility	6	2.52	1	.44	5	2.18	6	2.61	.....	.....
Varicocele	5	2.10	5	2.18	.....	.....	5	2.18	.....	.....
Overheight	1	.42	.....	.....	.....	.....	.....	.....	1	12.05
Injuries	59	24.81	53	23.09	6	2.61	59	25.71	.....	.....
Rejected for causes physical and mental	2,051	862.49	1,755	764.71	227	98.91	1,982	863.62	69	831.33
Rejected for causes not physical or mental	327	137.51	215	93.68	98	42.70	313	136.38	14	168.67
Total rejected	2,378	1,000.00	1,970	858.39	325	141.61	2,295	1,000.00	83	1,000.00

Heart disease caused the largest proportion of rejection, being 116.48 per 1,000, as compared with 104.18 for 1909. Venereal diseases were second, with diseases of the eye, ear, organs of locomotion, in the order given. Venereal disease, though second, was higher in 1910 than in 1909, being 113.96 as compared with 108.08 for the

previous year. In the colored race the ratio for venereal diseases was considerably greater than for like cause or any cause in the white race. It was also higher than for the previous year, being 228.92, as compared with 174.76 per 1,000.

Table No. 18 shows the principal occupations of 9,969 recruits enlisted during the year:

TABLE NO. 18.—*Principal occupations of recruits, first enlistment, year 1910.*

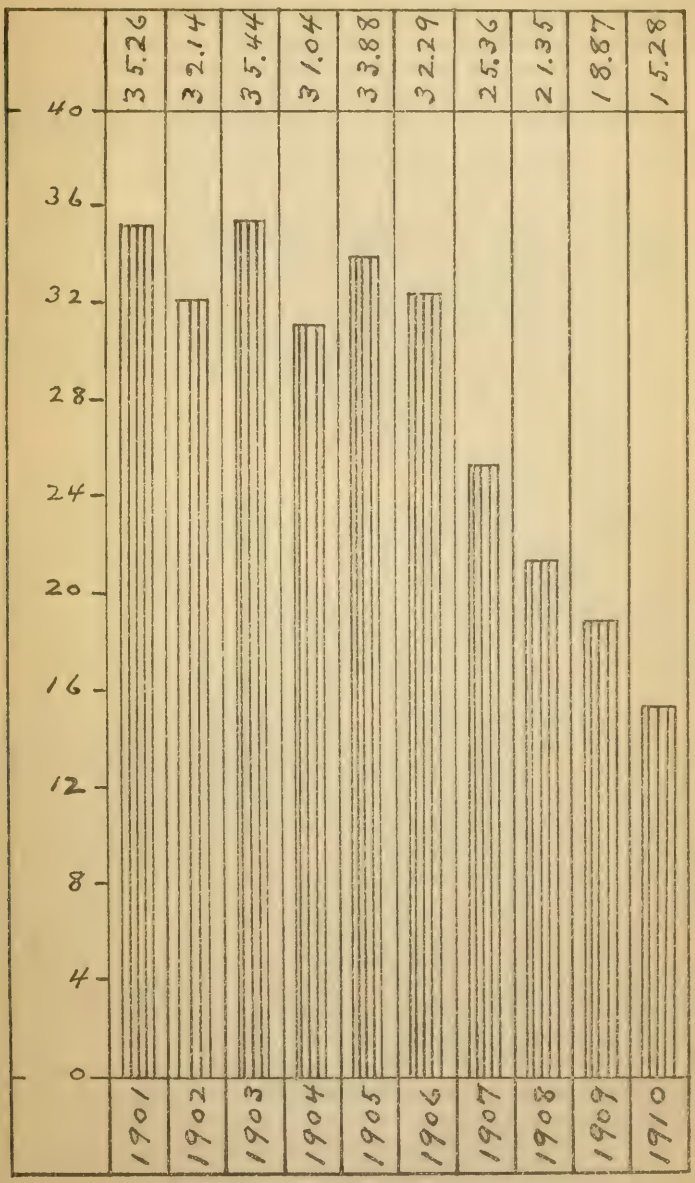
Occupation.	Number in each case.			Occupation.	Number in each case.		
	Total.	White.	Colored.		Total.	White.	Colored.
Laborers	2,590	2,490	100	Students	59	58	1
Farmers	1,522	1,516	6	Boiler makers	47	47	.....
Drivers and stablemen	586	574	12	Brick and stone masons	45	43	2
Clerks	520	518	2	Chauffeurs	45	40	5
Machinists	320	318	2	Tinners	42	42	.....
Firemen	278	274	4	Linemen	39	39	.....
Carpenters	267	263	4	Motormen	32	32	.....
Miners	266	264	2	Glassworkers	29	29	.....
Painters	248	244	4	Teachers	29	29	.....
Cooks	219	197	22	Conductors	28	28	.....
Electricians	190	190	.....	Nurses	26	26	.....
Musicians	186	180	6	Druggists	25	25	.....
Plumbers	141	139	2	Paper workers	23	23	.....
Railroad hands	132	129	3	Leather workers	21	21	.....
Barbers	132	128	4	Brass workers	19	19	.....
Blacksmiths	113	109	4	Hatters	18	18	.....
Bakers	106	106	.....	Plasterers	15	14	1
Tailors	105	102	3	Civil engineers	14	14	.....
Waiters	103	83	20	Lumbermen	13	13	.....
Printers	100	100	.....	Stenographers	13	13	.....
Salesmen	86	86	.....	Merchants	13	13	.....
Metal workers	82	82	.....	Cigar makers	12	12	.....
Sailors	79	79	.....	Gardeners	11	11	.....
Engineers	75	75	.....	Bartenders	11	11	.....
Telegraphers	74	74	.....	Jewelers	10	10	.....
Molders	69	69	.....	Draftsmen	10	10	.....
Weavers	69	69	.....	Cement workers	10	10	.....
Bookkeepers	68	68	.....	Coopers	10	9	1
Butchers	68	67	1	Laundrymen	10	10	.....
Mill workers	64	64	.....	Miscellaneous	246	241	5
Mechanics	63	63	.....				
Shoemakers	63	63	.....	Total	9,969	9,724	245
Porters	60	31	29				

DISCHARGES FOR DISABILITY FOR THE ARMY.

Soldiers stationed outside the territorial limits of the United States are now brought to San Francisco for discharge, except those belonging to the Porto Rican regiment and the Filipino Scouts. They are, however, credited in the tabulated reports to the country in which the soldiers were serving when they became disabled.

The number of discharges for disability continues to decrease, being for the Army for all causes 14.02 per thousand for the year 1910, as compared with 16.84 for 1909. This decrease has continued since 1906, when the discharge rate was 26 per thousand (see Table No. 19). The present system requires that all soldiers certified by medical officers to be permanently incapacitated for the military service shall be examined and observed by a board of three medical officer at a recruit depot or general hospital before being discharged. The reports of these boards are sent to the War Department and discharges for disability are now made only by authority of the Secretary of War. Of the soldiers so certified for discharge during 1910, 49 were returned to duty by these boards.

CHART I.—*Showing ratios per thousand of mean strength for discharges for disability, all causes, for ten years since 1901, for the United States proper.*



UNITED STATES (CONTINENTAL) EXCLUSIVE OF ALASKA.

The average mean strength of the troops serving in the United States was 55,680, of which 52,694 were white and 2,986 colored.

Deaths, as well as discharges of soldiers, which occurred in the United States among those who had been invalided home from their commands in foreign service, have been charged to the country where such commands are stationed. The noneffective, admission, discharge, and death rates were all lower for 1910 than for 1909. There has been a gradual decrease in these ratios for several years. The noneffective ratio for 1910, 1909, 1908, 1907, and 1906 were, respectively, 33.95, 39.70, 41.19, 45.22, and 46.92; for admission 899.25, 1,024.37, 1,148.59 1,172.04, and 1,179.93; for discharge 15.28, 18.87, 21.35, 25.36, and 32.29; for death 4.42, 4.84, 5.35, 5.63, and 5.28.

The white troops had higher rates than the colored for noneffective, admissions, and discharges, being 34.25, 903.31, and 15.45, as compared with 28.72, 827.53, and 12.39. The death rate for the colored troops was 7.37 as compared with 4.25 for the white troops.

The highest noneffective and admission rates were for venereal disease; the highest discharge rate for tuberculosis; and the highest death rate for disease was for pneumonia.

DISCHARGES FOR DISABILITY, UNITED STATES.

The disability discharge rate for the United States for 1910 was 15.28 per 1,000 as compared with 18.87 for 1909; 21.35 for 1908; 25.36 for 1907, and 32.29 for 1906. The improvement in 1910 was really more marked than is at first apparent. During the early part of the year the general policy was adopted at the general hospital at Fort Bayard, N. Mex., of discharging all cases of tuberculosis within a comparatively short time after their arrival there, if the prospect for early recovery was not good. A large number were thus discharged during the early part of the year. During the last few months of the year practically all cases of tuberculosis occurring during the first enlistment, were discharged and not sent to Fort Bayard. Such of these cases as had contracted the disease in line of duty were after discharge admitted to that hospital as beneficiaries of the Soldier's Home, if they presented themselves there. The actual number of cases of tuberculosis discharged during the last five years is as follows: 1906, 149 cases; 1907, 142 cases; 1908, 133 cases; 1909, 120 cases; and 1910, 223 cases. The large number of discharges for tuberculosis makes the rate higher that it normally would be. It should not be inferred from the above, however, that the incidence of tuberculosis was higher in 1910; the rate of admission for 1910 was 3.52 as compared with 4.74 for 1909. Excluding tuberculosis the rate for discharge for 1910 would be 11.46, as compared with 16.78 for 1909.

These figures show a very material reduction. The cause for this improvement is believed to have been due to General Order 174, War Department, 1909, which requires that soldiers certified by medical officers to be permanently incapacitated for the military service shall be examined and observed by a board of three medical officers at a recruit depot or a general hospital before discharge.

The following table shows the result of the work of the boards at the recruiting depots:

Stations.	Number received.	Number discharged.	Number returned to duty.	Number remaining at end of year.	Number in which line of duty was changed from "Yes" to "No."	Number in which line of duty was changed from "No" to "Yes."
Slocum	146	129	17	.....	16	2
Logan	64	62	2	.....	2	.....
McDowell	69	64	5	.....	1	.....
Jefferson Barracks	84	56	19	9	8	.....
Columbus Barracks	27	18	6	3	2	1
Total	390	329	49	12	29	3

The principal causes of discharge, with the percentage of discharges were as follows: (1) Tuberculosis, 29.23; (2) venereal diseases, 13.89; (3) insanity, 8.13; (4) diseases of the heart, 5.50; (5) epilepsy, 4.33.

The following table shows the causes of discharges for disability for the year 1910, United States (continental):

TABLE No. 19.—*Discharges for disability, year 1910, United States, continental (excluding Alaska).*

Causes of discharge.	Number discharged.	Percentage of total discharges, for disease or external causes.	Discharges for disability.				
			In line of duty.	Not in line of duty.		Discharged for disability before assignment.	
				Contracted before enlistment.	Contracted after enlistment.	In line of duty.	Not in line of duty.
General diseases	383	60.20	242	45	96	6	21
Tuberculosis (of the lungs, 211; of other organs, 12)	223	29.23	214	9	.....	5	4
Venereal diseases	106	13.89	2	25	79	.....	15
Syphilis (primary, 1; secondary, 37; tertiary, 23; hereditary, 2)	63	8.26	1	16	46	.....	10
Gonorrhea (rheumatism, 31; chronic gonorrhea, 5; disease, eye, 3; orchitis, 2; other results, 2)	43	5.64	1	9	33	.....	5
Drug habit (cocaine, 8; opium, 6)	14	1.83	.....	4	10	.....	.....
Chronic articular rheumatism	12	1.57	9	3	.....	1	2
Chronic amœbic dysentery	10	1.31	10	.....	.....	.....	.....
Chronic alcoholism	7	.92	.....	1	6	.....	.....
Exophthalmic goitre	3	.39	1	2	.....	.....	.....
Carcinoma of the intestines	2	.26	2	.....	.....	.....	.....
Results of typhoid fever	2	.26	2	.....	.....	.....	.....
Tumor, nonmalignant	1	.13	.....	.....	1	.....	.....
Diabetes	1	.13	1	.....	.....	.....	.....
Akromegaly	1	.13	1	.....	.....	.....	.....
Chronic lead poisoning	1	.13	.....	1	.....	.....	.....
Diseases of the nervous system	128	16.78	59	59	10	.....	17
Insanity	62	8.13	40	17	5	.....	2
Epilepsy	33	4.33	5	25	3	.....	8
Neurasthenia	13	1.70	5	7	1	.....	3
Other diseases of the nervous system (psychasthenia, 6; hysteria, 4; chronic headache, 2; mental degeneracy, 1)	13	1.70	4	8	1	.....	2
Sclerosis	3	.39	2	1	.....	.....	1
Locomotor ataxia	2	.26	2	.....	.....	.....	.....
Chronic neuralgia	1	.13	1	.....	.....	.....	.....
Chorea	1	.13	.....	1	.....	.....	1
Diseases of the circulatory system	53	6.95	39	13	1	4	5
Organic disease of the heart	38	4.98	29	8	1	4	4
Functional diseases of the heart	4	.52	1	3	.....	.....	1
Varicose veins	4	.52	2	2	.....	.....	.....
Thrombosis and embolism	3	.39	3	.....	.....	.....	.....
Aneurism	2	.26	2	.....	.....	.....	.....
Phlebitis	2	.26	2	.....	.....	.....	.....

TABLE NO. 19.—*Discharges for disability, year 1910, United States, continental (excluding Alaska)*—Continued.

Causes of discharge.	Number discharged.	Percentage of total discharges, for disease or external causes.	Discharges for disability.				
			In line of duty.	Not in line of duty.		Discharged for disability before assignment.	
				Contracted before enlistment.	Contracted after enlistment.	In line of duty.	Not in line of duty.
Congenital malformation and arrested development	51	6.68	.....	51	.....	.....	16
Diseases of the digestive system	35	4.59	15	19	1	.....	13
Hernia	17	2.23	3	14	.....	.....	10
Chronic gastritis	5	.66	3	2	.....	.....	.....
Duodenal ulcer	3	.39	2	1	.....	.....	1
Cirrhosis of the liver	3	.39	2	.....	1	.....	.....
Chronic sprue	2	.26	2	.....	.....	.....	.....
Gastroenteritis, chronic	1	.13	.....	1	.....	.....	1
Chronic intestinal indigestion, and constipation	1	.13	1	.....	.....	.....	.....
Fistula in ano, chronic	1	.13	.....	1	.....	.....	1
Chronic appendicitis	1	.13	1	.....	.....	.....	.....
Splanchnoptosis	1	.13	1	.....	.....	.....	.....
Diseases of the genito urinary system	32	4.19	9	23	.....	.....	11
Diseases of the bladder (enuresis, 18; chronic cystitis, 3)	21	2.75	.....	21	.....	.....	10
Diseases of the kidneys (Bright's disease, 8; Renal calculi, 1)	9	1.18	8	1	.....	.....	.....
Loss of kidney	1	.13	1	.....	.....	.....	.....
Vesical calculi	1	.13	.....	1	.....	.....	1
Diseases of the organs of special sense	31	4.06	19	12	.....	1	7
Diseases of the middle and internal ear (otitis media, 15; deafness, 1)	16	2.10	9	7	.....	1	3
Diseases of the globe (keratitis, 3; iritis, 1)	4	.52	3	1	.....	.....	1
Trachoma	3	.39	2	1	.....	.....	1
Chronic choroiditis	2	.26	2	.....	.....	.....	.....
Everted lower lid	1	.13	.....	1	.....	.....	.....
Blindness caused by snow blindness	1	.13	1	.....	.....	.....	.....
Amaurosis	1	.13	1	.....	.....	.....	.....
Errors of refraction	1	.13	.....	1	.....	.....	1
Optic atrophy	1	.13	1	.....	.....	.....	.....
Exophthalmos, left eye	1	.13	.....	1	.....	.....	2
Diseases of the organs of locomotion	28	3.67	17	11	.....	.....	1
Diseases of the joints (flat feet, 5; synovitis, 5; arthritis, 4; relaxed ligaments, 3; ankylosis, 1; loose cartilage, 1)	19	2.49	12	7	.....	.....	1
Diseases of the bones (periostitis, 1; necrosis, 1; exostosis, 1)	3	.39	3	.....	.....	.....	.....
Muscular rheumatism	2	.26	1	1	.....	.....	.....
Contracture of extensor tendons	1	.13	.....	1	.....	.....	.....
Hypertrophy of left leg	1	.13	1	.....	.....	.....	.....
Bunions	1	.13	.....	1	.....	.....	.....
Bursitis, chronic	1	.13	.....	1	.....	.....	1
Diseases of the respiratory system	12	1.57	7	5	.....	1	2
Diseases of the lungs (asthma, 5; pneumonia, 1; chronic pleurisy, 1; chronic bronchitis, 1; chronic fibrosis, 1)	9	1.18	6	3	.....	1	.....
Chronic nasal catarrh	1	.13	.....	1	.....	.....	1
Goitre, simple	1	.13	1	.....	.....	.....	.....
Aphonia	1	.13	.....	1	.....	.....	1
Diseases of the skin and cellular tissue (corns, 2; chronic eczema, 2; hyperidrosis, 2; gangrene, 1)	7	.92	2	5	.....	.....	3
Ill-defined diseases (pain and tenderness following operations performed before enlistment)	2	.26	.....	2	.....	.....	2
Senile debility	1	.13	1	.....	.....	.....	.....
Total	763	.....	410	245	108	12	99
EXTERNAL CAUSES.							
Fractures	26	29.55	21	.....	5	1	.....
Gunshot wounds	12	13.64	11	.....	1	.....	.....
Secondary results of injuries	10	11.36	.....	10	.....	.....	3
Incised wounds	9	10.23	8	.....	1	.....	.....
Crushing	7	7.95	3	.....	4	.....	.....
Lacerated wounds	6	6.82	5	.....	1	.....	.....
Sprains	4	4.55	4	.....	.....	.....	.....
Dislocations	4	4.55	4	.....	.....	.....	.....
Burns	2	2.27	2	.....	.....	.....	.....
Punctured wounds	2	2.27	2	.....	.....	.....	.....
Burns by corrosive substances	2	2.27	1	.....	1	.....	.....
Concussion of the spine	1	1.14	1	.....	.....	.....	.....

TABLE No. 19.—*Discharges for disability, year 1910, United States, continental (excluding Alaska*—Continued.

Causes of discharge.	Number discharged.	Percentage of total discharges, for disease or external causes.	Discharges for disability.				
			In line of duty.	No. in line of duty.		Discharged for disability before assignment.	
				Contracted before enlistment.	Contracted after enlistment.	In line of duty.	Not in line of duty.
EXTERNAL CAUSES—continued.							
Contusion	1	1.14	1				
Contused wound	1	1.14	1				
Frostbite	1	1.14	1				
Total	88		65	10	13	1	3
Total disease	763	89.66	410	245	198	12	99
Total external causes	88	10.24	65	10	13	1	3
Grand total	851	100.00	475	255	121	13	102

There were 105 unassigned recruits discharged at the various depots during the year.

TABLE No. 20.—*Deaths among troops serving in the United States, continental (excluding Alaska), in 1910.*

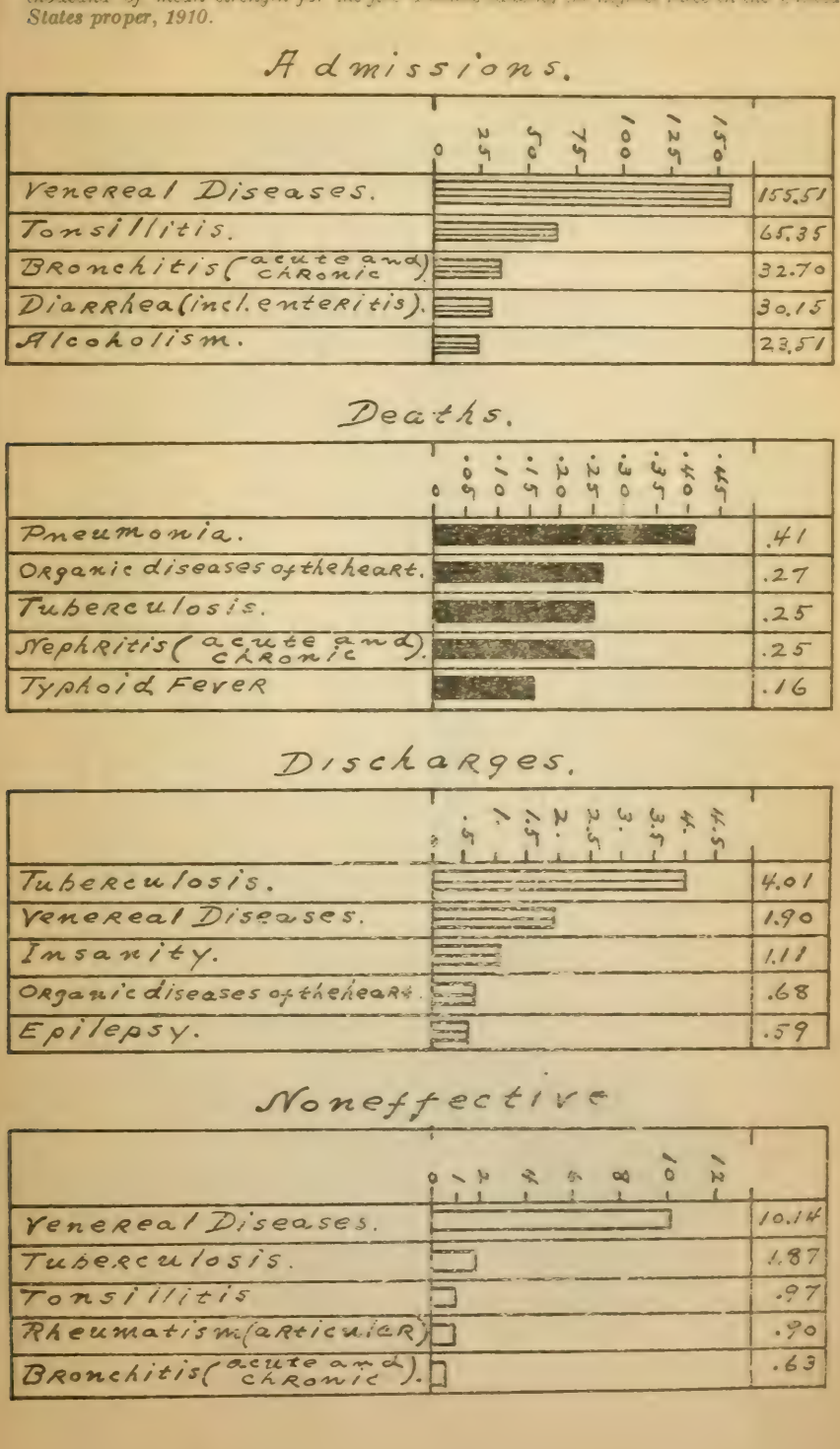
Causes of death.	Number.	Ratio per 1,000 of—	
		Mean strength.	Deaths from disease or external causes.
Pneumonia	23	0.41	179.69
Organic disease of the heart	15	.27	117.18
Tuberculosis (of the lungs, 11; of other organs, 3)	14	.25	109.37
Chronic nephritis	10	.18	78.12
Typhoid fever	9	.16	70.31
Appendicitis	7	.13	54.69
Alcoholism (acute, 4; delirium tremens, 1)	5	.09	39.06
Acute nephritis	4	.07	31.25
Aneurism	4	.07	31.25
Cirrhosis of the liver	3	.05	23.44
Cerebrospinal fever	3	.05	23.44
Syphilis	2	.04	15.62
Diabetes	2	.04	15.62
Pleuritis	2	.04	15.62
Cancer	2	.04	15.62
Smallpox	1	.02	7.81
Measles	1	.02	7.81
Dysentery	1	.02	7.81
Erysipelas	1	.02	7.81
Staphylococcemia	1	.02	7.81
Tumor nonmalignant	1	.02	7.81
Acute articular rheumatism	1	.02	7.81
Addison's disease	1	.02	7.81
Pernicious anemia	1	.02	7.81
Cerebral meningitis	1	.02	7.81
Cerebral hemorrhage	1	.02	7.81
General paresis	1	.02	7.81
Epilepsy	1	.02	7.81
Chronic bronchitis	1	.02	7.81
Bronchopneumonia	1	.02	7.81
Ulcer of the stomach	1	.02	7.81
Strangulated hernia	1	.02	7.81
Intestinal obstruction and perforation	1	.02	7.81

TABLE NO. 20.—*Deaths among troops serving in the United States, continental (excluding Alaska), in 1910*—Continued.

Causes of death.	Number.	Ratio per 1,000 of— Mean strength.	Deaths from disease or external causes.
Duodenal ulcer	1	0.02	7.81
Biliary calculi	1	.02	7.81
Hepatic abscess	1	.02	7.81
Chronic pyelonephritis	1	.02	7.81
Chronic cystitis	1	.02	7.81
Total deaths for disease	128	2.30	1,000.00
EXTERNAL CAUSES.			
Suicidal:			
By gunshot wounds (rifle, 9; revolver, 6; not stated, 2)	17	.31	144.07
By poisoning (phenol, 2; strychnine, 1; morphine, 1; wood alcohol, 1; carbolic acid, 1; oxalic acid, 1)	7	.13	59.32
By crushing	1	.02	8.47
By drowning	1	.02	8.47
By hanging	1	.02	8.47
Total suicides	27	.48	228.81
Homicidal:			
Gunshot wounds (in brawls—revolver, 3; rifle, 1, total 4; by comrades, revolver, 2; by sentry, while attempting to escape, rifle, 2; by women, revolver, 2; by civilian, mistaken for another man, revolver, 1)	11	.20	93.22
By fracture of skull (in brawls—brick, 1; not stated, 1, total, 2; hit by policeman with barrel of revolver, 1)	3	.05	25.42
By concussion of brain (hit by prisoner with unknown blunt object, 1; hit by comrade with unknown object, 1)	2	.04	16.95
Total homicides	16	.29	135.59
Accidental:			
By drowning (overturning of small boats, 6; while bathing, 5; falling from boats, 4; circumstances not stated, 4; while watering horses, 2; falling from bridge, 1; while attempting to recover a wounded duck, 1)	23	.41	194.92
By gunshot wounds (explosion of siege gun at target practice, 11; by comrades, revolver, 2; while cleaning rifle, 1; discharge of gun while acting as sentry, carbine, 1; while on duty at target range, 1)	16	.29	135.59
By crushing (railroad accidents and injuries, 6; falling from high places, 4; fracture of skull and other injuries, 2; laceration of liver and other injuries, 2; caught between wagon and tree in a runaway, 1; horse while jumping hurdles fell on soldier, 1)	12	.22	101.69
By poisoning (all from drinking wood alcohol)	8	.14	67.80
By fracture of skull (railroad accidents and injuries, 3; falling down stairs, 2; falling from pier, 1; struck by iron bar while moving target, 1)	7	.13	59.32
Absorption of deleterious gases (inhalation of illuminating gas, 2; ether anesthesia, 1)	3	.05	25.42
By concussion of brain received in boxing bout	1	.02	8.47
By cerebral hemorrhage, caused by a fall from bicycle	1	.02	8.47
By incineration during burning of jail, while in hands of civil authorities	1	.02	8.47
By sunstroke	1	.02	8.47
By frost bite, followed by gangrene	1	.02	8.47
By exposure and exhaustion, following capsizing of sailboat	1	.02	8.47
Total accidental	75	1.35	635.59
Total external causes	118	2.12	479.67
Total disease	128	2.30	520.33
Grand total	246	4.42	1,000.00

The death rate for disease for the United States was 2.30 as compared with 2.97 for 1909. The total number of deaths from all causes was 246, of which 128 were due to disease and 118 from external causes. Of the latter, 75 were accidental, 27 were suicidal, and 16 were homicidal.

CHART J.—*Showing the relative admission, death, discharge, and noneffective ratios per thousand of mean strength for the five diseases causing the highest rates in the United States proper, 1910.*



PREVALENCE OF SPECIAL DISEASES, UNITED STATES.

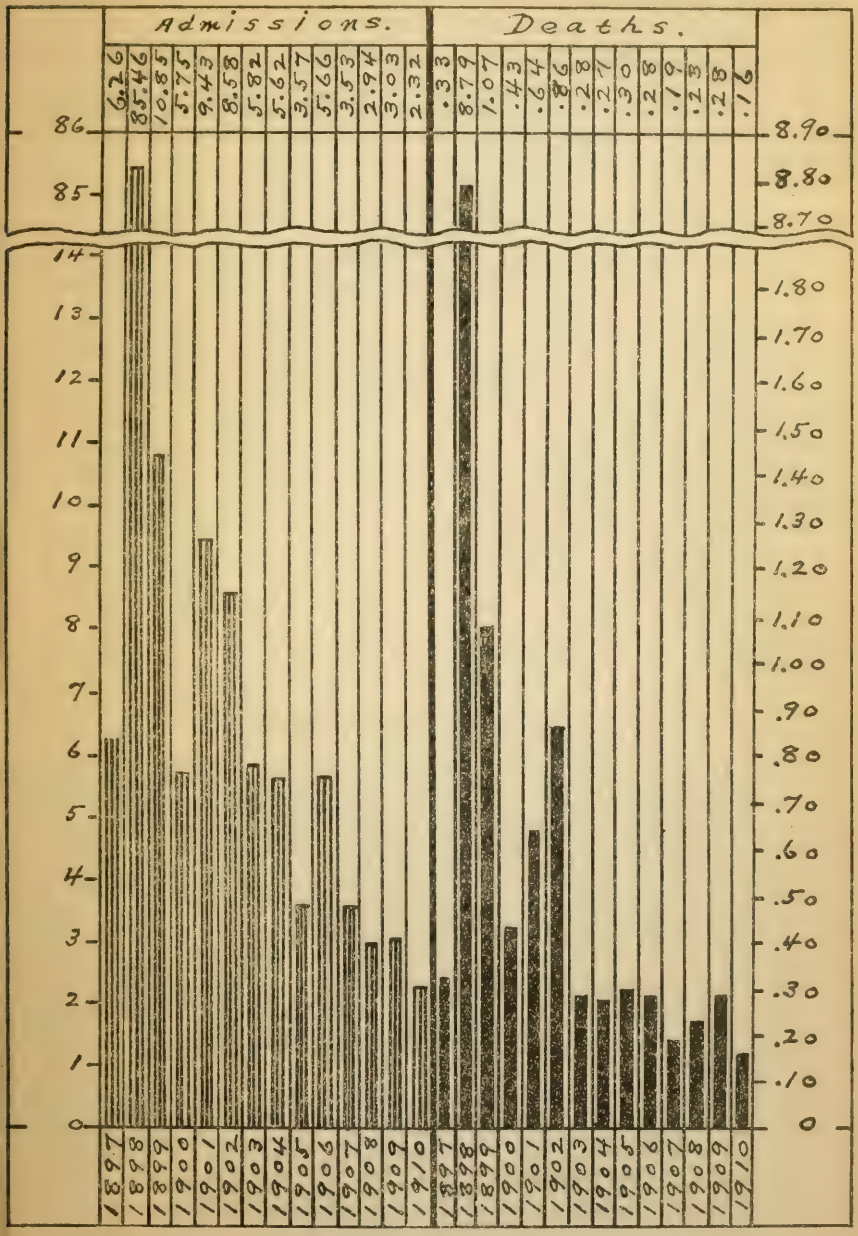
TYPHOID FEVER.

One hundred and forty-two cases of typhoid occurred during the year in the Army stationed within the geographical limits of the United States, with 10 deaths, as compared with 173 cases and 16 deaths for 1909. Its distribution at the different posts was as follows:

TABLE No. 21.—*Typhoid fever at military stations, 1910.*

Station.	Admitted.	Days treated.	Constantly sick.	Died.
Fort D. A. Russell, Wyo.	16	1,562	4.28	2
Washington Barracks, D. C.	7	7	.02	
Fort Leavenworth, Kans.	7	514	1.41	
Fort Mackenzie, Wyo.	7	540	1.48	
Camp of instruction, Chickamauga Park, Ga.	7	18	.05	
Fort Sheridan, Ill.	6	477	1.31	1
Jefferson Barracks, Mo. (recruit depot)	6	447	1.22	1
Fort Monroe, Va.	5	442	1.22	
Fort Slocum, N. Y. (recruit depot)	5	218	.60	
Fort Des Moines, Iowa.	5	168	.46	
Field, Department of the East.	4	190	.52	
Fort Oglethorpe, Ga.	4	484	1.33	2
Columbus Barracks, Ohio (recruit depot)	4	274	.75	
Fort Niagara, N. Y.	3	200	.55	
Camp of instruction, Fort Benjamin Harrison, Ind.	3	10	.03	
Fort Myer, Va.	2	5	.01	
Fort Porter, N. Y.	2	169	.46	
Fort Washington, Md.	2	106	.29	
Fort Wood, N. Y.	2	126	.35	
Fort Screven, Ga.	2	211	.58	
Fort Benjamin Harrison, Ind.	2	244	.67	
Fort Thomas, Ky.	2	85	.23	
Fort Wayne, Mich.	2	255	.70	
Fort Leavenworth, Kans. (prison guard)	2	113	.31	
Fort Sam Houston, Tex.	2	76	.21	
Fort Logan, Colo. (recruit depot)	2	87	.24	
Walter Reed General Hospital, Washington, D. C.	2	743	2.04	
29 other stations having 1 case each	29	2,078	5.70	3
Remaining from previous year		1,460	4.00	1
Total	142	11,309	30.98	10

CHART K.—*Showing the admission and death ratios per thousand of mean strength for typhoid fever, by years, since 1897, for the United States proper.*



The admission and death rates for this disease were 2.42 and 0.17, respectively, as compared with 3.03 and 0.28 for 1909. The case mortality was 7.4 per cent, this and the death rate being lower than for the years 1909 and 1908.

The rate of admission for the officers was 4.34 and the death rate 0.33. The case mortality was 7.6 per cent.

The ratio of incidence for white troops was 2.41 and for colored troops 0.67.

The following comparative table shows the most important variations in the occurrence of this disease for the present year as compared with 1907, 1908, and 1909:

TABLE NO. 22.—*Typhoid fever admissions at certain posts.*

Post.	1910	1909	1908	1907
Fort D. A. Russell, Wyo.	16	35	1	1
Washington Barracks, D. C.	7	4	1	2
Fort Leavenworth, Kans.	7	7	3	12
Fort Mackenzie, Wyo.	7	1	.....	.....
Fort Sheridan, Ill.	6	3	1	.....
Jefferson Barracks, Mo. (recruit depot)	6	1	3	2
Fort Monroe, Va.	5	6	6	4
Fort Slocum, N. Y. (recruit depot)	5	.....	1	6
Fort Des Moines, Iowa.	5	2	10	3
Fort Oglethorpe, Ga.	4	.....	.....	4
Columbus Barracks, Ohio (recruit depot)	4	3	6	10
Fort Niagara, N. Y.	3	18	.....	1
Fort Sill, Okla.	1	16	2	.....
Fort McPherson, Ga.	1	10	.....	.....
Fort Sam Houston, Tex.	2	8	2	16
Vancouver Barracks, Wash.	1	6	.....	.....
Army and Navy General Hospital, Hot Springs, Ark.	1	5	2	.....
Presidio of San Francisco, Cal.	1	4	2	1
Fort Robinson, Nebr.	.....	2	5	2
Fort Wingate, N. Mex.	1	1	8	.....
Fort Riley, Kans.	.....	1	5	.....
Fort Thomas, Ky.	2	.....	2	7

INVESTIGATION OF OUTBREAKS.

At Fort D. A. Russell, Wyo., there was an outbreak during the latter part of summer and the fall. Sixteen cases occurred among the troops and two among the civilians. Ten of these cases were in Battery E, Fourth Field Artillery. In this battery the cases occurred as follows: August 9, October 26, November 2, 5, 6, 8, 10, 12, 14, and 18. The first case was apparently sporadic. The other nine seem closely connected, and this was probably a company epidemic with contact infection. On November 12 the battery was quarantined and the quarters thoroughly disinfected. The temperatures of all the men were taken each day, and the last three cases isolated early, in this way. The case on October 26 probably contracted the infection at Cheyenne.

The other cases which occurred in the post were scattered in different organizations and in time of occurrence. These were all sporadic apparently and the infection was probably contracted either at Cheyenne or in the surrounding country. There were two deaths, one due to intestinal hemorrhage and one to cerebral embolism.

A very interesting little epidemic occurred in August in Company A, First Battalion of Engineers, at Washington Barracks, D. C. This was carefully investigated by Lieut. George B. Foster, Medical Corps. It was his opinion that the infection occurred while on the return

march from the camp at Gettysburg. But for the fact that a large per cent of this company had had the typhoid prophylactic, the epidemic would no doubt have been much more extensive. Lieut. Foster says:

On June 14, 10 days prior to leaving Washington Barracks for the Gettysburg maneuvers, 92 members of Company A, First Battalion of Engineers, received the first antityphoid inoculation. On July 6, 52 of the above men received the second inoculation, and on July 16, 51 of these received the third inoculation. Of the remaining 26 men of the command a few refused vaccination and others were on detached duty or temporarily absent when the first inoculation was given.

Two of the 26 uninoculated men gave a history of having had typhoid fever, and by virtue of that fact may be considered immune. This leaves 24 men, of the total strength of 118 men, who had not acquired an immunity to typhoid fever by either preventive inoculation or a previous attack of the disease.

On August 11, five days after the troops returned from Gettysburg, two of the uninoculated men developed typhoid fever, and between August 20 and 23 four secondary cases occurred, also among the uninoculated. Not a single case occurred among those who had received the preventive inoculations, while 25 per cent of the nonimmune, living under exactly the same conditions, succumbed to infection.

The other case that occurred at this post was a sporadic one, in an officer. Mention is made under the head of "Camps of instruction" of the cases that occurred at Chickamauga Park and Benjamin Harrison. The cases that occurred at the other posts were all scattered as to the time and place of occurrence. In the majority of the cases the infection was probably contracted at some neighboring town or in the surrounding country. Several of the cases at Jefferson Barracks and Columbus Barracks were in recently arrived recruits who were in the stage of incubation at the time of enlistment.

A CHRONIC TYPHOID BACILLUS CARRIER FROM THE PHILIPPINES.

Private (first class) M. M., Engineer Corps, United States Army, age 30, 10 years' service in the Army and 1 year in the Philippines. No prior history of typhoid. He had dysentery in 1907, and was discharged as cured after two weeks' illness. In June, 1910, he developed a severe attack of diarrhea. The first day he had about 25 stools. The stools at first contained some blood and mucus. He was at that time on a mapping detail in the Philippine Islands and did not report for treatment. The diarrhea persisted until September, during which time he lost 28 pounds in weight. On admission to the division hospital at Manila, September 5, 1910, he was having about four stools daily; liver and spleen not palpable; border and tip of tongue red, and a whitish coat on dorsum. The temperature was usually 97° F. in the morning and from 98.6° F. to 99.4° F. in the afternoon. The stools were usually liquid and yellowish or clay colored, and contained no ova or ameba. Blood negative for plasmodia. The patient was ordered to the United States for treatment, the diagnosis being chronic gastroenteritis. He sailed on October 14. His stool was plated on Endo's media by the tropical board on October 13. On October 14 a motile organism was isolated, which agglutinated with typhoid immune serum, and later was shown culturally to be bacillus typhosus. His blood gave a positive Widal. The surgeon at the general hospital, San Francisco, Cal., was notified. After admission there his stools were examined weekly and were always positive for the typhoid bacillus. He was treated with autogenous vaccine and sodium salicylate. On April 17 he was transferred to the Walter Reed

General Hospital, Washington, D. C. Treatment with calomel and Dover's powder failed to produce any decided effect, but after 8 ounces of buttermilk, three times a day, was added to the diet the typhoid bacilli became very few in number. After a month's treatment with sodium sulfite in 5-grain doses, in addition to the buttermilk, the specific organism disappeared from the feces for about 2 weeks, then it again returned in small numbers, which was the date of the last report (July 31, 1911).

VACCINATION AGAINST TYPHOID.

During the calendar year of 1910, 16,093 persons were protected against typhoid fever by means of prophylactic vaccination. Of these, 73 per cent received three doses, 21 per cent two doses, and 5.7 per cent one dose. During the first six months of 1911, 27,720 persons were immunized: of these, 93 per cent received three doses, 6 per cent two doses, and 1 per cent one dose.

A complete record of both immediate and ultimate results has been kept of each person treated: the immediate effect of vaccination is shown by the presence of a local reaction consisting of a red and tender area which subsides in the course of a day or two and a general reaction consisting of malaise and sometimes fever. In no case has there been any untoward results, not even an abscess at the site of inoculation. The general reactions have been tabulated as in former years and are as follows:

General reactions, 1910.

	Number of doses.	Absent.	Mild.	Moderate.	Severe.
		Per cent.	*Per cent.*	*Per cent.*	*Per cent.*
First	16,093	63.6	31.2	4.5	0.5
Second	15,173	71.2	23.3	5.1	.4
Third	11,754	79.6	16.3	3.8	.2

The number of severe general reactions is seen to be somewhat less than in 1909, when they were 0.7, 0.6, 0.2 per cent, after the first, second, and third doses, respectively.

During the first six months of 1911 the general reactions were as follows:

General reactions, January 1 to June 30, 1911.

	Number of doses.	Absent.	Mild.	Moderate.	Severe.
		Per cent.	*Per cent.*	*Per cent.*	*Per cent.*
First	27,720	71.5	27.2	0.9	0.1
Second	27,399	71.6	27.0	1.1	.1
Third	25,718	77.3	22.1	.4	.08

In this series, the largest so far tabulated, general reactions were absent or mild in 99 per cent of the inoculated.

In one case only does the reaction merit special comment. The man was stationed at Fort Casey (Register No. 2250), and on March

30, 1911, he received the first dose of vaccine, developing a severe reaction, which necessitated his admission to the post hospital. He had chills, a temperature of over 103, sweats, and great prostration. After four days he had apparently recovered entirely and was returned to duty, but after a week he again had chills, fever, cough, and night sweats and a small amount of mucopurulent expectoration. At this time the physical examination showed dullness at the right apex and a few moist râles over both apices, and a diagnosis of pulmonary tuberculosis was made. This case indicates that the injunction in the circular of instructions against the vaccination of any but healthy persons should be constantly borne in mind.

About the 1st of July, 1911, the custom of recording the degree of severity of the general reaction was discontinued, since the observations thus far made are numerous enough to show definitely the rarity of unpleasant and severe reactions and to demonstrate that there is a very small amount of inconvenience and discomfort following immunization. The slight amount of illness and the total absence of mortality compare very favorably with the occasional unfortunate infections following vaccination against smallpox.

Since no further statistics of general reactions will be collected, the entire experience covering the years 1909, 1910, and 1911 is consolidated in the following table:

	Number of doses.	Absent.	Mild.	Moderate.	Severe.
		Per cent.	*Per cent.*	*Per cent.*	*Per cent.*
First	45,680	68.2	28.9	2.4	0.3
Second	44,321	71.3	25.7	2.6	.2
Third	38,902	78.0	20.3	1.5	.1
Total	128,903				

A few cases of typhoid have occurred among immunized men of the Army, but these have in most instances been mild and all have ended in recovery.

Typhoid among the vaccinated in the Army.

	Cases.	Deaths.	Number of doses of prophylactic.	Diagnosis confirmed in laboratory.
1909	1		2	Yes.
1910	7		6, 3 doses; 1, 2 doses.	Yes, 1; no, 6.
1911	3		2, 3 doses; 1, 2 doses.	Yes, 1; no, 2.
Total to July, 1911	11			

From time to time the typhoid prophylactic has been furnished the Navy, and reports have been furnished by them covering the immunization of 2,752 persons, among whom there have occurred two cases of typhoid fever with one death. The first case occurred in March, 1911, in a man presumably already infected at the time he received the first and only dose, since the diagnosis of typhoid was established

one week afterwards. The second case has been reported by Phelps and Clark in the United States Naval Medical Bulletin, 1911, volume 336. It is highly probable in this case also that the patient was an ambulatory typhoid at the time of inoculation. He received only one dose and sickened with a fulminating type of fever two days after, his entire illness lasting only five days. Shortly before death he had an intestinal hemorrhage and the autopsy showed swollen and ulcerated Peyer's patches and other lesions found in the second and third weeks of the disease.

The period between the last dose of vaccine and the onset of typhoid in this series of 11 cases is as follows:

Case No.	Patient.	Typhoid developed—	Station of patient.
1	R. J.	6 days after second dose	U. S. Army transport.
2	A. T.	9 months after second dose	Philippines.
3	A. S.	1 month after third dose	Fort Mott, N. J.
4	R. S.	4½ months after third dose	Philippines.
5	F. L.	3½ months after third dose	Fort Benjamin Harrison, Ind.
6	B. H.	1 month after third dose	Fort Washington, Md.
7	S. P.	....do	Do.
8	H. C.	4 months after third dose	Philippines.
9	J. B.	9 months after third dose	Do.
10	R. K.	5 days after third dose	San Diego, Cal.
11	J. D.	(?)	San Antonio, Tex.

Some confusion in diagnosis has arisen from the fact that a positive Widal reaction has no significance in an immunized person, and some of the cases listed above were only diagnosed typhoid after a positive Widal reaction had been obtained. It is by no means certain that all the cases listed above as typhoid were actually such, the diagnosis in 4 of the 11 cases being doubtful.

It is not surprising that prophylactic treatment sometimes falls short of giving complete immunity. There are no doubt persons who can not be altogether protected against infection, although even in such instances the vaccine no doubt diminishes the severity of the disease and lowers the death rate.

It is generally acknowledged that vaccination against smallpox will not invariably protect against infection, and in the light of our recent experience in Texas we believe that the protection given against typhoid compares favorably with that against smallpox. It is highly probable that had the troops been exposed to smallpox as they were to typhoid that there would have been a fair amount of variola among the troops.

The typhoid fever rate for the United States proper during 1910 has already been given (2.32 per 1,000) and it is remarkable in being the lowest recorded in the service. For the first six months of 1911, even considering the extraordinary amount of exposure incident to camp life, the rate shows decided improvement over that of 1910. There were 29 cases with 1 death during the first six months of 1910, as against 16 cases and 3 deaths in 1911. The mortality in both years has been among the noninoculated.

The great protection given by prophylactic immunization is shown in several instances. Thus Foster (Journal American Medical Association, 1910, LV, 1908) has reported a small epidemic following summer maneuvers at Gettysburg in 1910. A company of engineers comprising a total of 118 men returned to Washington by marching,

and a week after their return typhoid appeared and spread until six men had sickened. Typhoid prophylactic treatment was voluntary at that time, and only 92 had been immunized. None of these contracted the disease; all cases were among the 24 noninoculated men, the rate of incidence among the unprotected being 25 per cent.

Another instance has been reported by Lyster (Military Surgeon, 1911, XXVIII, 528). The Eleventh United States Cavalry participated in a military tournament in Nashville, Tenn., lasting 10 days, and on the return to Fort Oglethorpe, Ga., typhoid appeared and spread until 10 cases had occurred. At this time only 165 of the command had been immunized. The post commander therefore took measures which resulted in the immunization of 736 persons in the regiment and of 70 civilians at the post. The epidemic promptly ceased on completion of the immunization and soon afterwards the regiment, with the exception of one troop, left the post on a 21-day march, going to Knoxville, Tenn., and return, some 300 miles. Maj. Lyster states:

> There was no attempt to boil or sterilize the drinking water used on this march, the supply being from whatever was used locally. On the return of the command, after spending 21 days in a country where typhoid is prevalent practically throughout the year and having lived under war conditions, the sick report was stated by the commanding officer to have been nil. No subsequent cases of typhoid developed. While from the nature of the experiment the result is only presumptive evidence in favor of inoculation it can not well be made conclusive for obvious reasons.

Viewed in the light of our recent experiences in Texas and on the Mexican border, it is perfectly apparent that the regiment owed its freedom from typhoid to the prophylactic treatment it had received before the march began.

The orders for mobilization of a division in Texas were published on March 6, 1911, and the first regiment arrived on March 10, 1911. It was decided to immunize the entire command against typhoid, and an order to this effect was issued by direction of the Secretary of War on March 9, 1911. Inoculations were begun as soon as possible and continued as additional troops arrived. Up to June 30, 1911, there had been 8,097 persons treated at San Antonio. Many men had already received the prophylactic at home stations and some organizations arrived on the ground with as many as 80 per cent of their personnel immunized. The mean strength of the command at San Antonio was approximately 12,000. There were practically no skin infections at the site of inoculation nor were there any alarming general reactions, and in over 90 per cent of the cases treated the general reaction was absent or mild.

Up to the present time, June 30, 1911, a period of approximately four months, only two cases of typhoid have occurred among the troops in Texas, and one of these was in an uninoculated civilian teamster. The other case was quite mild and in the absence of a blood culture would probably not have been diagnosed; the patient was a Hospital Corps man who had received only two doses of the prophylactic. Both cases terminated favorably, the second having fever for only 16 days.

The absence of typhoid was not due to lack of exposure, for the fever prevailed in San Antonio during the entire time, as shown by the records of the city health office, 49 cases with 19 deaths having been reported during the four months ending June 30, 1911.

The following case is of interest as showing the possibilities of infection at this station: Sergt. M., who had not been immunized, left camp at Fort Hancock, Tex., on April 29, 1911, for San Antonio, Tex., where he had been summoned as a witness before a civil court. He was not attached to the maneuver camp and so escaped the prophylactic treatment there. He stopped in San Antonio from April 30 to May 11, 1911, and was admitted to the post hospital at Fort Clark, Tex., on May 13, 1911, with typhoid fever. The surgeon at Fort Hancock states that there was no typhoid at that station, and maintains that the disease was acquired in San Antonio, and his opinion receives confirmation from the fact that the man had remained in that city two weeks, or more than the average period of incubation.

In Galveston during the same period there were stationed between 3,000 and 4,000 men. No cases of typhoid occurred among these troops, although 192 cases were reported in the city during the same period. The water, milk, and to a considerable extent the food supplies were identical. The camp site adjoined the city and the men spent much of their time, when off duty, in the city, where they ate, drank, and slept. Had one wished to conduct an experiment on a large scale he could hardly have wished for better conditions than existed at this place. There were two circumstances in which the condition of the troops differed from those of the inhabitants of Galveston—camp life with its absence of sanitary plumbing and the fact of immunization against typhoid by means of bacterial vaccines. The troops living under the disadvantages of a camp but protected by inoculation had no fever, while in the city with its comforts and conveniences, but without antityphoid vaccines, cases of fever were frequent.

In addition to these larger bodies of troops, a small guard was scattered along the Mexican border, and the commanding general, Department of Texas, made the following statement July 11, 1911, on a sanitary report:

> I desire to call attention to the fact that not a single case of typhoid has been reported as contracted on the border in this department, from the mouth of the Rio Grande to Columbus, N. Mex., although in several localities there was typhoid in the vicinity of camps. This speaks well for both sanitary measures and supervision by commanders of organizations and detachments and for the medical officers on duty with them.

In southern California and Arizona about 2,000 troops were mobilized and compulsory immunization was instituted at once. One case of typhoid ending in recovery has been reported in the person of a private of infantry who gave a history of having had typhoid in 1905. The fever began five days after the third dose. The diagnosis of typhoid, while not established beyond doubt, is probably correct, and the case is apparently an instance of unusual susceptibility to typhoid infection, as neither previous typhoid fever nor prophylactic immunization was sufficient to protect him against infection.

The prophylactic has been prepared in the laboratories of the Army Medical School and practically no changes have been made during the year in the technic of its manufacture. A selected strain of the *B. typhosus* is grown on agar in Kolle flasks for 24 hours; the growth is washed off with normal salt solution, killed by heat at 55° to 56° C., in a water bath, standardized by counting the bacteria according to the method of Wright, and after being diluted

with salt solution one quarter of 1 per cent of tricresol is added. One cubic centimeter of the finished prophylactic contains 1,000,000,000 bacilli; the first dose is 500,000,000, the second and third given after 10 and 20 days being 1,000,000,000 each. It is put up in hermetically sealed glass ampuls of a capacity of 1, 5, 10, and 25 cubic centimeters. During the year 1910, there was prepared and issued 75,843 cubic centimeters, 68,592 of which was used in the military service and 7,251 cubic centimeters outside of the Army. The principal shipments were as follows:

Vaccine used in 1910.

	C. c.
Department of health of Buffalo, N. Y.	708
Florida State Board of Health	786
Iowa State Board of Health	144
Texas State Board of Health	36
Georgetown University, D. C.	12
North Carolina Medical College	244
Tufts Medical School	12
Neurological laboratory	60
National Guard of Missouri	18
National Guard of New Mexico	1,242
National Guard of Virginia	123
Marine Hospital Service	207
United States Navy	3,281
Doctors for private use	378
Total outside of Army for 1910	7,251
Total used in Army for 1910	68,592
Grand total	75,843

From the 1st of January to June 30, 1911, a total of 136,010 cubic centimeters have been shipped. The Army has used 112,772 and all others 23,238 cubic centimeters. The following list shows the details of distribution.

Vaccine used in first six months, 1911.

	C. c.
Iowa University College of Medicine	36
Austin Sanitarium	132
Hon. Chas. L. Bartlett, M. C.	3
Louisiana National Guard	120
Maryland National Guard	1 500
Massachusetts National Guard	348
Minnesota National Guard	156
Mississippi National Guard	172
Missouri National Guard	2,472
New York National Guard	4,800
North Carolina National Guard	300
Ohio National Guard	769
South Carolina National Guard	1,204
Virginia National Guard	1,482
Wisconsin National Guard	12
Public Health and Marine-Hospital Service	36
Virginia Military Institute	18
Doctors for private use	2,122
United States Navy	7,556
Total outside of Army	23,238
Total used in Army	112,772
Grand total	136,010

The routine administration of the typhoid prophylactic to all recruits was begun in June, 1911, under the authority of General Order 76, dated War Department, June 9, 1911, and at the present time about 3,000 men are being treated each month. No difficulty has been found in the simultaneous vaccination against smallpox and typhoid fever.

The most important innovation of the year is the introduction of compulsory immunization of troops ordered into active service in Texas and along the Mexican border, and of all recruits on joining the recruiting depots; in this way the immunization of all persons in the military service under 35 years of age will be completed in about three years' time.

It is worthy of remark that compulsory vaccination against typhoid had never been attempted in any military service until used in our army in Texas and along the Mexican border in the spring of 1911. In this region troops to the number of about 15,000 have been immunized while under canvas and engaged in the multitudinous activities of maneuvers, without interference with their duties and without any bad results. The almost complete absence of typhoid fever, only two cases with no fatalities being reported in this large number of men, after a period of four months in the field, justifies the position that has repeatedly been taken with reference to immunizations against typhoid. After this conclusive demonstration of its value, its use might well be considered by civil practitioners as a safe and reliable means of individual prophylaxis against this widespread epidemic disease. Its general use need not interfere with the movement for improved sanitary conditions in municipalities or country districts, but would prevent innumerable infections and many deaths which under present circumstances are bound to occur.

VENEREAL DISEASES.

The propaganda for the prevention of venereal diseases in the Army which was initiated by this office in January, 1909, has begun to show good results as demonstrated by the rates for 1910 as compared with the preceding year. These were as follows, for the whole Army:

	Entire Army.		Army in the United States proper.	
	1909	1910	1909	1910
	Per cent.	*Per cent.*	*Per cent.*	*Per cent.*
Admissions per 1,000	196.99	174.95	177.46	155.51
Original admissions (cases)	169.61	154.91	151.35	137.98
Constantly noneffective rate	13.07	11.51	11.44	10.14

The following tables give the occurrence of venereal disease in the Army and the comparative rates for the past five years for each of these diseases in the United States.

TABLE No. 23.—*Venereal diseases—Admissions and discharges, Army, 1910.*

(Mean strength, 71,534.)

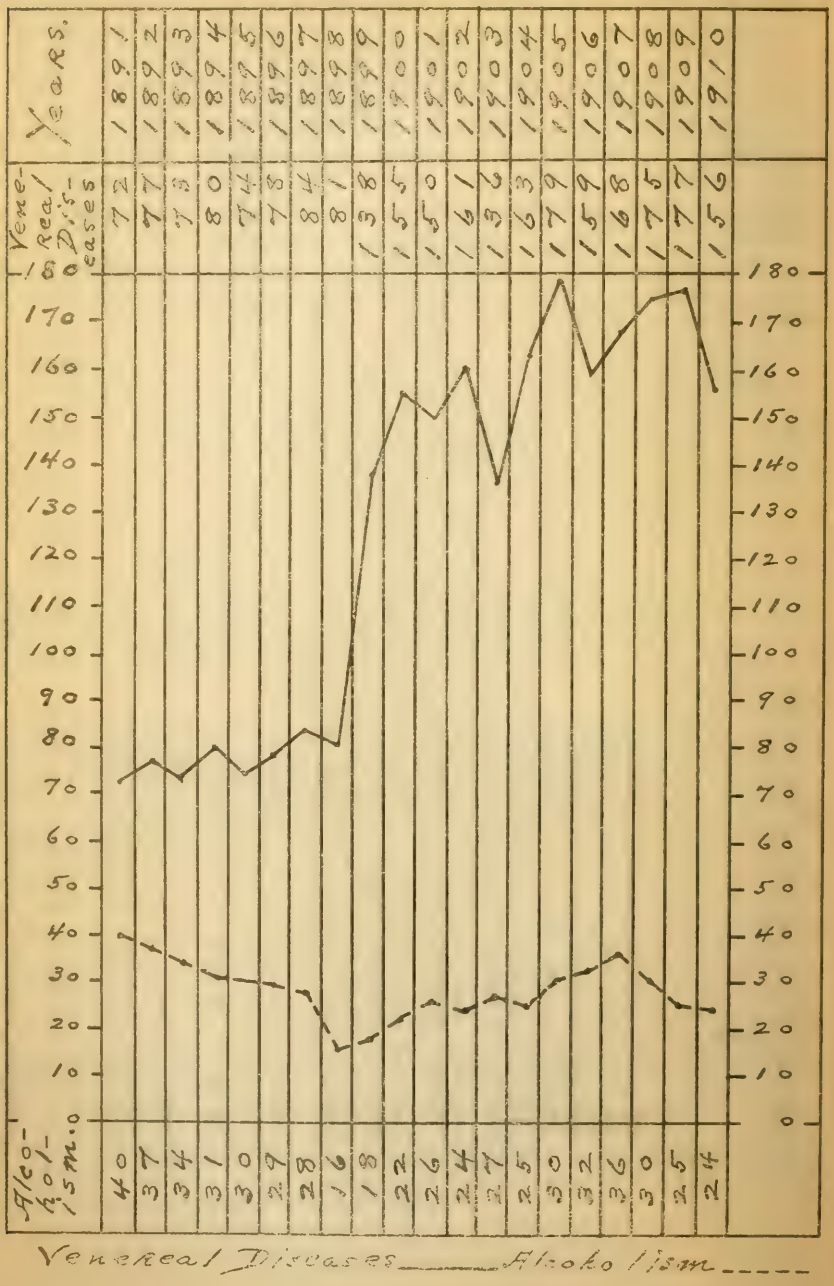
	Syphilis.		Chancroids.		Gonorrhea.		Total.	
	Admissions.	Discharges.	Admissions.	Discharges.	Admissions.	Discharges.	Admissions.	Discharges.
United States	1,484	63	1,471	.....	5,704	43	8,659	106
Alaska	9	1	9	.....	32	1	50	2
Hawaii	42	1	18	.....	134	.....	194	1
Porto Rico	.....	.....	1	.....	2	.....	3	.....
Philippines	549	2	747	.....	2,088	6	3,384	8
Transports	33	.....	46	.....	146	.....	225	.....
Total	2,117	67	2,292	.....	8,106	50	12,515	117
Ratios per 1,000 of mean strength	29.59	.93	32.04	.....	113.32	.70	174.95	1.63

Days	300,449
Constantly sick	822.15
Ratio per 1,000	11.51

TABLE No. 24.—*Venereal diseases, by years, 1905 to 1910, United States, continental (excluding Alaska).*

	Admitted.			Discharged on certificate of disability.			Died.			Noneffective.		
	Total.	White.	Colored.	Total.	White.	Colored.	Total.	White.	Colored.	Total.	White.	Colored.
Gonorrhea and results:												
1910	102.44	102.17	107.17	0.77	0.78	0.67	.....	.....	.....	5.90	5.98	4.41
1909	125.27	124.49	147.37	1.36	1.34	2.08	.....	.....	.....	7.22	7.23	7.02
1908	123.50	123.05	151.93	1.06	1.08	.....	.....	.....	.....	6.71	6.72	6.18
1907	107.68	107.68	107.59	1.39	1.37	1.92	0.03	.....	0.96	6.24	6.29	4.63
1906	105.21	106.11	91.49	1.07	1.11	.40	.02	0.03	.....	6.18	6.29	4.48
1905	118.31	120.12	92.05	1.29	1.25	1.80	.02	.03	.....	6.26	6.46	4.08
Chancroid:												
1910	26.42	25.83	36.84	.....	.....	.....	.....	.....	.....	1.53	1.51	1.86
1909	25.33	25.09	32.13	.....	.....	.....	.....	.....	.....	1.54	1.52	2.03
1908	28.20	27.64	63.54	.04	.02	1.38	.....	.....	.....	1.75	1.71	4.38
1907	34.78	34.38	48.03	.....	.....	.....	.....	.....	.....	2.23	2.21	2.73
1906	26.41	26.01	32.65	.05	.03	.40	.....	.....	.....	1.73	1.69	2.48
1905	20.39	30.27	31.85	.05	.05	.....	.....	.....	.....	1.90	1.88	2.08
Syphilis:												
1910	26.65	26.68	26.12	1.13	1.16	.67	.04	.04	.....	2.71	2.75	2.07
1909	26.85	26.47	37.74	1.92	1.81	5.19	.....	.....	.....	2.68	2.64	3.74
1908	23.15	22.46	66.30	1.62	1.64	.....	.04	.04	.....	2.17	2.14	3.46
1907	25.36	25.43	23.05	2.36	2.43	.....	.....	.....	.....	2.75	2.76	2.45
1906	27.28	27.34	26.20	2.79	2.90	1.19	.05	.03	.40	2.98	3.02	2.40
1905	30.02	30.40	25.54	3.32	3.37	2.70	.02	.....	.30	2.88	2.93	2.34
Total venereal:												
1910	155.51	154.69	170.13	1.90	1.94	1.34	.04	.04	.....	10.14	10.25	8.34
1909	177.46	176.04	217.24	3.28	3.14	7.27	.....	.....	.....	11.44	11.39	12.79
1908	174.84	173.14	281.77	2.73	2.75	1.38	.04	.04	.....	10.63	10.57	14.02
1907	167.82	167.49	178.67	3.74	3.80	1.92	.03	.....	.96	11.22	11.26	9.81
1906	158.91	159.47	150.34	3.91	4.03	1.98	.07	.05	.40	10.90	11.00	9.36
1905	178.72	180.70	154.44	4.66	4.66	4.51	.04	.03	.30	11.05	11.27	8.50

CHART L.—*Showing the admission rates for venereal diseases and alcoholism in the United States, years 1891 to 1910 (exclusive of Alaska, beginning 1904).*



In the absence of specific instructions from the War Department the post authorities have had the widest latitude to adopt the agencies thought best to accomplish the object in view, and this office has liberally supplied post surgeons with whatever medical supplies they desired for prevention and disinfection purposes. In this way almost every possible point of view has been considered and a great variety of methods practically applied.

In order to collect and collate this experience a letter was written to The Adjutant General on January 18, 1911, as follows:

It is desired by this office to continue the study of means of reducing the very serious inefficiency from venereal diseases. For this purpose and in order to get information needed in the preparation of the annual report of this office for the calendar year 1910, it is requested that reports be called for from all post surgeons showing what steps are being taken at the posts for the instruction and protection of soldiers along the following lines:

(1) Instruction of the men by lectures, demonstrations, or printed circulars, by medical officers or company commanders, regarding the dangers of illicit sexual intercourse and the advantages of sexual continence.

(2) For those who have not the moral stamina and self-control to observe continence, the necessity of using every precaution for personal cleanliness and also systematic disinfection after illicit sexual intercourse. All the information obtainable is desired as to the use of the "K" packet for the latter purpose.

(3) An expression of opinion is desired from post surgeons and commanding officers as to the efficacy of these measures, and suggestions are desired as to ways in which the prophylaxis of venereal diseases may be made more effective than at the present time.

This request was approved by the Secretary of War and a copy of the letter referred to all department commanders in the United States, to the commanding general, Philippines Division, and the commanding officers of all independent posts, directing compliance with the request made therein. These reports from commanding officers and post surgeons at every station of the Army, with the comments of the department commanders, have been received and constitute a most valuable exhibit of the present status of this question.

Below is shown in tabular form the venereal rate at the posts in the United States.

TABLE NO. 24½.—*Showing mean strength, admissions, and ratios per thousand, for venereal diseases in posts of more than 300 men in the United States, continental (including Alaska) and Hawaii, 1910.*

Posts.	Admissions.		Mean strength.
	Total.	Ratio.	
Fort Ethan Allen, Vt.	205	273.33	750
Fort Howard, Md.	120	263.16	456
Fort Des Moines, Iowa.	163	256.69	635
Fort Crook, Nebr.	111	231.73	479
Fort Sam Houston, Tex.	368	217.49	1,692
Fort McPherson, Ga.	138	216.64	637
Fort Screven, Ga.	100	211.86	472
Madison Barracks, N. Y.	101	206.12	490
Fort Monroe, Va.	269	199.40	1,349
Fort Thomas, Ky.	94	191.84	490
Fort McHenry, Md.	62	189.60	327
Fort Hamilton, N. Y.	101	189.49	533
Fort Moultrie, S. C.	92	189.30	486
Fort Washington, Md.	100	188.32	531
Fort Wayne, Mich.	93	187.12	497
Fort Andrews, Mass.	73	182.50	400
Fort Snelling, Minn.	191	181.04	1,055
Fort McKinley, Me.	119	177.35	671
Presidio of San Francisco, Cal.	432	173.42	2,491
Fort Baker, Cal.	74	170.51	434
Fort Sheridan, Ill.	189	168.60	1,121

TABLE No. 24½.—*Showing mean strength, admissions, and ratios per thousand, for venereal diseases in posts of more than 300 men in the United States, continental (including Alaska) and Hawaii, 1910*—Continued.

Posts.	Admissions.		Mean strength.
	Total.	Ratio.	
Fort H. G. Wright, N. Y.	70	168.27	416
Fort Benjamin Harrison, Ind.	137	166.06	825
Schofield Barracks, Hawaii	99	163.64	605
Fort Oglethorpe, Ga.	115	162.66	707
Fort Lawton, Wash.	49	160.13	306
Fort D. A. Russell, Wyo.	378	156.46	2,416
Mean rate for the United States.		155.51	
Fort Totten, N. Y.	113	152.29	742
Fort Barrancas, Fla.	83	140.68	590
Fort Williams, Me.	68	140.21	485
Fort Adams, R. I.	86	134.37	640
Vancouver Barracks, Wash.	148	124.89	1,185
Fort Terry, N. Y.	53	121.56	436
Fort Morgan, Ala.	48	121.52	395
Fort Sill, Okla.	45	115.09	391
Fort Leavenworth, Kans.	235	112.12	2,096
Fort Shafter, Hawaii.	34	111.48	305
Washington Barracks, D. C.	57	100.35	568
Fort Riley, Kans.	201	97.86	2,054
Fort Mackenzie, Wyo.	50	97.09	515
Presidio of Monterey, Cal.	96	94.67	1,014
Fort Jay, N. Y.	34	94.18	361
Fort Flagler, Wash.	31	93.09	333
Fort Hancock, N. J.	80	92.60	864
Fort Douglas, Utah.	68	91.15	746
Fort Myer, Va.	76	89.94	845
Fort George Wright, Wash.	39	88.84	439
Fort Caswell, N. C.	30	87.72	342
Fort Robinson, Nebr.	42	86.42	486
Fort Stevens, Oreg.	29	84.06	345
Fort Yellowstone, Wyo.	26	80.75	322
Fort Du Pont, Del.	43	79.63	540
Fort Barry, Cal.	22	70.74	311
Fort Niagara, N. Y.	21	68.40	307
Fort Wadsworth, N. Y.	27	62.64	431
Fort Casey, Wash.	19	57.58	330
Fort Meade, S. Dak.	24	48.39	496
Plattsburg Barracks, N. Y.	34	46.83	726
Fort Worden, Wash.	24	33.56	715

From this list the posts having a mean strength of less than 300, and the recruit depots have been excluded. Special study has been devoted to the reports of those having the highest and the lowest rates to ascertain the reasons for the enormous discrepancy in results. This is by no means clear, and it perhaps can not be expected that the commanding officers and post surgeons of the delinquent posts should give an altogether clear exposition of the causes of failure. Enough is shown, however, to make clear the futility of the present method of leaving this most urgent question to the individual initiative of local commanders and their medical advisers. Not only is there a wide diversity of method, but in the matter of interest the whole gamut is displayed between utter neglect and earnest zeal. It is therefore plainly necessary for the War Department to take hold of the matter, and it is believed that sufficient experience has accumulated to afford basis for a clear-cut, vigorous, and successful policy. From these reports the following deductions may fairly be drawn:

1. Instruction of the men by lectures, printed circulars, and by medical officers and company commanders regarding the dangers of illicit and promiscuous sexual indulgence and the advantages of self-control and continence. Most of the reports bear testimony to the

value of this instruction, and at some posts it is stated that a distinct improvement in the venereal record followed the delivery of lectures on these subjects. A few officers expressed skepticism of its value. One post surgeon in the United States and one commanding officer in the Philippines expressed the opinion that this is the only agency which should be used. It seems quite certain that this instruction is valuable directly in proportion to the earnestness devoted to it and the imagination and skill which is employed in making the instruction interesting and attractive. It is also clear that the efforts of the medical officers can not accomplish much without the constant interest, moral support, and active assistance of the commanding officers and company officers.

2. Instruction in the employment of personal cleanliness and the use of disinfectant applications to prevent contagion by those men who will not be restrained by moral and prudential considerations from exposure to venereal diseases.

This instruction and facilities for applying it are given on the ground that although it is a grievous fault that a young man should fail to control his passions, it is a far worse thing for him and for the country if, in addition to the moral delinquency, he acquire an infectious disease which unfits him for the performance of his duty as a soldier and seriously impairs his usefulness as a citizen. While realizing the value of moral prophylaxis, it is none the less an obligation of medical officers both from the professional and the military point of view to teach also the value of personal cleanliness and disease prevention, that to the moral taint a physical one may not be added. It has been claimed by some that the prevention of venereal infection is an encouragement to licentiousness by making it safe. This has not been found to be true in the Navy where, by the questioning of all men returning from shore leave as to exposure to venereal infection, accurate data as to the amount of illicit indulgence are obtained. It has been found, on the contrary, that the instruction on the subject, which is a part of the system, results in a diminution. In fact, it is easy to observe that in this matter the influence of fear as a determent is of very slight importance, particularly at the age of the great majority of our soldiers.

Opportunity to take these precautions was offered to the men in various ways, which come under three general classes:

(*a*) At a number of posts a small compartment was fitted up in connection with each company lavatory, in which were provided facilities for washing and appropriate disinfectants with instructions for their use. This compartment has a light all night, can be bolted on the inside, and is at all times available. It would seem that so convenient and desirable an arrangement would appeal to prudent and sensible individuals who had exposed themselves. The evidence is, however, that in many cases, either through intoxication or indifference, these facilities are not used.

(*b*) At perhaps the majority of posts the provision of facilities for cleanliness and disinfection are provided at the hospital, and a hospital-corps man is usually kept on duty in charge of the administration of the latter. In many cases a list is kept of the men presenting themselves for treatment. The testimony is nearly unanimous that this arrangement is not taken advantage of by the men, although at some posts soldiers who have failed to take

these precautions after exposure are subjected to military discipline if they contract venereal disease. It is undoubtedly a fact that the keeping of a list or record of those who receive disinfectant treatment or are issued appliances for that purpose discourages applicants.

(c) The individual packets of disinfectants (K packet), which are intended to be used as soon as convenient after exposure, have been distributed to a large number of military posts and used concurrently with one of the above-mentioned methods or in lieu of them. The testimony as to the value of this method is nearly, but not quite, unanimous. Most of the reports state that where they have failed it is because the men can not be induced to use them, or because the men, when under the influence of alcohol, do not use them intelligently. This is undoubtedly due in part to the unattractive appearance of the silver preparation used as a disinfectant, which is dark in color and stains the clothing. It has been found that where these appliances are kept at the hospital the men will not go to get them. In cases where they have been distributed to the companies their use has apparently been somewhat more general, although in these cases it is difficult to exclude the elements of waste.

It has been recognized by all surgeons that the use of two disinfecting preparations in the packet was undesirable; and Col. L. M. Maus, chief surgeon, Department of the Lakes, who has given much study to this question, has devised a packet containing a single disinfectant mixture, being an ointment containing 30 per cent calomel, 67 per cent lanoline, and 3 per cent phenol, which he believes to be efficacious against all three of the venereal infections. There has been so far some conflict of evidence as to its efficacy against gonorrhea, but if this fact can be established the greater simplicity of its use and the more attractive appearance of the remedial agent will probably cause it to be much more generally used than any other agent heretofore devised.

3. Physical inspections of the command once or twice a month for the purpose of detecting unreported cases of venereal diseases and for the examination of the men as to personal cleanliness and other matters of personal hygiene were first adopted in the Philippines Division and afterwards by departmental orders in the Departments of California and the East. They are also held at a number of posts in other departments, though apparently by no means in all, whether because of department orders or by the personal initiative of post commanders, is not known.

The value of these inspections is generally conceded, and they undoubtedly result in bringing promptly under treatment a large number of cases of disease which would otherwise be neglected and unreported. The effect of them has thus been to apparently increase the number of cases reported and the diminution of the venereal rate during the present year, in spite of this influence, must be given due credit.

At most posts it appears that married men and senior noncommissioned officers are very properly excused from these inspections.

4. In the reports from a number of posts having small venereal rates, it was mentioned that the cooperation of the civil authorities in the neighboring towns had been secured to exercise sanitary

supervision over the prostitutes, either by requiring them to submit to medical inspection or getting rid of those who were diseased by fines, imprisonments, and closing of houses, etc. In the Philippines also there is a marked difference between the rates at the posts where some system of control over these women in the neighboring towns or barrios is exercised. In other words, when venereal diseases are treated by any system of rational supervision and control like other infectious diseases a good result is manifest.

5. In a considerable number of reports it was stated that if the sale of beer in the canteen could be reestablished it would be a very important factor in the control of venereal diseases, as well as of alcoholism, by enabling the men to enjoy the privileges of a soldiers' club in the garrison without the necessity of visiting low dives outside of the reservation where instead of the temperate pleasures of a beer garden they are tempted to drink distilled liquors of bad quality and are exposed to the solicitations of the worst class of prostitutes.

6. Several commanding officers ascribe the high venereal rate at their posts to the large number of recruits received, and point out that recruits are much more prone to acquire venereal infections than trained soldiers. This statement is borne out by the records of the recruit depots, and on account of the special character of their garrisons they have not been included in the list of posts with venereal rates on another page. Their rates are as follows:

Recruit depots.	Admissions.	
	Total.	Ratio.
Jefferson Barracks, Mo	319	318.36
Columbus Barracks, Ohio	338	217.07
Fort McDowell, Cal	163	270.76
Fort Slocum, N. Y	177	178.79
Fort Logan, Colo	63	121.39

It will be observed that Jefferson Barracks and Columbus Barracks exceed any other post in the Army, while Fort McDowell is not far behind. The record at Fort Slocum is much better, although it considerably exceeds the average rate for the Army in the United States. The comparatively better record of this post is, however, probably explained by its position on an island where the opportunities for mingling with the civil population are considerably restricted. This also applies to the Fort McDowell recruit depot.

7. One of the facts most strongly brought out is the indifference of the majority of the enlisted men to this whole question. It appears that they not only do not fear these diseases, but are also not adverse to spending long periods of time in idleness while under treatment for them, and while their duty is being performed by their comrades. Although an expression of opinion on this subject was not called for in the circular letter, no less than 40 commanding officers and 48 post surgeons expressed their opinion that the pay of men excused from duty on account of venereal diseases should be stopped for the time lost. Among the officers expressing this opinion were: Maj. Gen. J. Franklin Bell; Maj. Gen. Frederick D. Grant; Maj. Gen. Thomas H. Barry; Brig. Gen. Frederick Funston; Brig. Gen. J. W. Duncan; Col. W. P. Evans, Twenty-fifth Infantry; Col. Daniel Cornman, Seventh

Infantry; Col. W. B. Davis, Medical Corps; Col. I. W. Taylor, Second Field Artillery; Col. A. B. Dwyer, Fourth Field Artillery; Col. T. W. Jones, Tenth Cavalry; Col. J. VanR. Hoff, Medical Corps; Col Edwin F. Glenn, Twenty-third Infantry; and Col. A. Murray, Fourth Cavalry.

Maj. W. H. Sage, adjutant general, Fort William McKinley, Rizal, P. I., on February 27, 1911, in a letter addressed to The Adjutant General of the Army, advanced strong argument in favor of the forfeiture of pay. He said in part:

* * * Soldiers sick in hospital or excused from duty on account of disease (venereal, not contracted in line of duty, should forfeit their pay while so incapacitated. * * * Hospital records show that soldiers are criminally careless with reference to contracting this disease, either by not taking the necessary precautions or by not following the directions of the medical officers who attend them, which results in a slow recovery or a return to the hospital in a few days. * * * Some drastic legislation is necessary to make them realize that disability from venereal disease can be and is to be avoided. Men are constantly returning to the hospital after being discharged as cured, but due to their own neglect (drinking, carousing, etc.), the disease returns and they return to the hospital.

The following remarks were made by various officers to whom this paper was referred:

Maj. W. E. Purviance, post surgeon.

With reference to the matter of venereal disease, it is believed by the undersigned that more will be accomplished toward its elimination by forfeiture of pay for the time on sick report than any other means. As soon as soldiers learn that their pay will stop with disqualification for duty because of venereal disease, they will avail themselves of the preventive measures that are now offered them at all posts. Until such time, a large percentage who indulge will willingly take the risk of disease, believing, as many of them do, that the gravity of the matter is much exaggerated by the officers who lecture to them on the subject.

Col. Daniel Cornman, Seventh Infantry, post commander:

* * * I can not too highly recommend action along the lines suggested by Maj. Sage. That men in the service of the United States should be encouraged not to control their passion by the knowledge that, not only no punishment will be given them for loss to the Government of their services for many days by such indulgence, but that in the meantime they will be carefully nursed, and their duty fall on other men, is to be regretted.

Brig. Gen. Frederick Funston, commanding the Department of Luzon:

* * * The undersigned is very strongly in favor of the action recommended by Maj. Sage in this communication. The arguments set forth therein and in the accompanying indorsements are believed to cover the case so fully that there is no necessity for extended remarks.

The division commander, Gen. J. F. Bell, stated in forwarding the paper to the Adjutant General:

The original recommendation by Maj. Sage (a part of which seems to have been forgotten in previous indorsements) was in substance as follows: That a law be secured from Congress which would result in a total loss of pay—first, while soldiers are confined in the guardhouse under sentence of a court; second, while sick in quarters or hospital from venereal disease.

It is believed that it would be both justifiable and beneficial to secure such a law, but before it is secured, covering absence from duty on account of venereal disease, efficacious means of lessening liability to its contraction should be furnished all soldiers. It is assumed to be impracticable to induce them to be celibates.

It seems to be the belief of most Army officers expressing an opinion upon this subject that action by Congress will be necessary to legalize this procedure, and this opinion was apparently shared by the Secretary of War, who, in his report of December 31, 1910, said (p. 17):

> If Congress should authorize the stoppage of pay in the case of men unfitted for duty on account of venereal diseases and alcoholism it might exercise a deterrent effect which would be valuable in conjunction with other methods adopted by the military authorities to check the ravages of these diseases.

The question having been, however, referred by the Chief of Staff to the Judge Advocate General, he has rendered an opinion that the relation between the soldier and the Government is a contractual one and that such stoppages of pay may be authorized by regulation, provided that the recruiting circulars do not contain promises in conflict with such action. He said:

> While it would be entirely proper, under the decisions, for a regulation to be formulated, based on the idea that for no service rendered no pay was due, under which incapacity for service, due to disease, would entail a stoppage of pay during the period of disability, such regulation would be in bad faith should the present inducements to enlistment continue as they are. Such a regulation would demand either an entire omission from the recruiting circulars of the statement that a solider will receive full pay and allowances during sickness, or a qualification that he will receive full pay while sick, except where the sickness is the result of his own misconduct.
>
> To sum up, an officer is entitled to his pay whether or not he renders service, except in so far as the statutes and regulations made under authority of statutes have made exception to that rule. There is no warrant, either in law or regulations, for a forfeiture of pay caused by a lack of service rendered by an officer while incapacitated through sickness of whatever character. On the contrary, it is specifically stated in the statute that while prevented from rendering service through illness the officer shall receive full pay. To warrant a forfeiture of his pay for a period of disability due to sickness, a change in the existing statutes would be necessary.
>
> In regard to enlisted men, who have contracted to serve the United States, it is well settled that if pay is to be had service must be rendered, and, under this rule, it would be quite possible to hold that loss of service caused by disease contracted through his own fault would warrant the forfeiture of the soldier's pay during the period of disability, but for the undertaking by the United States, as a part of the contract of enlistment, to grant full pay to the soldier while sick.

It is firmly believed that if the Secretary of War will make such a regulation after having made modifications in the recruiting circulars and will issue orders prescribing a uniform system of instruction and prophylaxis for the Army to be carried out with energy and earnestness at all posts, a great reduction in the occurrence of these diseases will be made, comparable perhaps with the vast improvement which has been made in the venereal rate of the British Army in India in the past few years by similar methods.

It is recommended that these orders include:

1. A course of instruction in the physiology and hygiene of the sexual organs and in moral prophylaxis. Line officers and chaplains should take part in this instruction.

2. The establishment in each company barracks of a special lavatory where are provided facilities for washing and disinfection for those who have exposed themselves to venereal diseases.

3. The sale at cost in the canteen of K packets of patterns approved by the Medical Department.

4. Physical inspections of the bodies of the men twice a month at unexpected times—preferably immediately after a drill or formation.

5. Stoppage of pay for enlisted men for all time when excused from duty on account of venereal diseases, alcoholism, or drug addiction.

MALARIA.

The occurrence of malarial fever, as shown by chart M continues to decrease. The admission rate for 1910 was 16.36 as compared with 23.06 for 1909, 26.69 for 1908, and 30.20 for 1907, which in its turn was the lowest on record in this office. This continuous improvement is to be credited not alone to the efforts of medical officers, supported by commanding officers, but also to the liberal provision of wire-gauze screens for doors and windows by the Quartermaster's Department.

Table No. 25 shows the relative incidence of the various forms of malarial infection for the past five years.

TABLE No. 25.—*Malarial infections, United States, continental (excluding Alaska), year 1910.*

[Ratios per 1,000 of mean strength.]

Malarial fevers.	Admitted.			Discharged on certificate of disability.			Died.			Noneffective.		
	Total.	White.	Colored.	Total.	White.	Colored.	Total.	White.	Colored.	Total.	White.	Colored.
Intermittent:												
1910	14.57	15.18	3.68	.....	.....	.....	.....	.....	.....	0.28	0.29	0.06
1909	20.29	20.74	7.65	.....	.....	.....	.....	.....	.....	.41	.42	.13
1908	24.12	24.33	11.05	.....	.....	.....	.....	.....	.....	.49	.49	.14
1907	28.44	29.28	.96	.....	.....	.....	.....	.....	.....	.53	.54	.02
1906	47.32	49.19	18.53	.....	.....	.....	.....	.....	.....	.93	.97	.39
Æstivo-autumnal:												
1910	1.36	1.39	1.00	.....	.....	.....	.....	.....	.....	.05	.05	.03
1909	1.96	1.99	1.02	.....	.....	.....	.....	.....	.....	.07	.07	.03
1908	2.09	2.11	1.38	.....	.....	.....	.....	.....	.....	.08	.08	.04
1907	1.51	1.55	.....	.....	.....	.....	.....	.....	.....	.08	.08	.....
1906	1.87	1.94	.80	.....	.....	.....	0.02	0.03	.....	.10	.11	.03
Malarial cachexia and undetermined malarial infections:												
1910	.43	.46	.....	.....	.....	.....	.....	.....	.....	.03	.03	.....
1909	.80	.83	.....	0.02	0.02	.....	.....	.....	.....	.04	.04	.....
1908	.47	.48	.....	.....	.....	.....	.....	.....	.....	.01	.01	.....
1907	.26	.26	.....	.....	.....	.....	.....	.....	.....	.02	.02	.....
1906	1.08	1.07	1.21	.05	.05	.....	.....	.....	.....	.09	.08	.15
Total malarial diseases:												
1910	16.36	17.02	4.69	.....	.....	.....	.....	.....	.....	.36	.37	.09
1909	23.06	23.57	8.67	.02	.02	.....	.....	.....	.....	.51	.53	.16
1908	26.69	26.91	12.43	.....	.....	.....	.....	.....	.....	.58	.59	.18
1907	30.20	31.09	.96	.....	.....	.....	.....	.....	.....	.63	.65	.02
1906	50.27	52.20	20.56	.05	.05	.....	.02	.03	.....	1.12	1.16	.55

CHART M.—*Showing the relative admission and noneffective ratios per thousand of mean strength for the decade 1901-1910, for malarial fevers in the United States proper.*

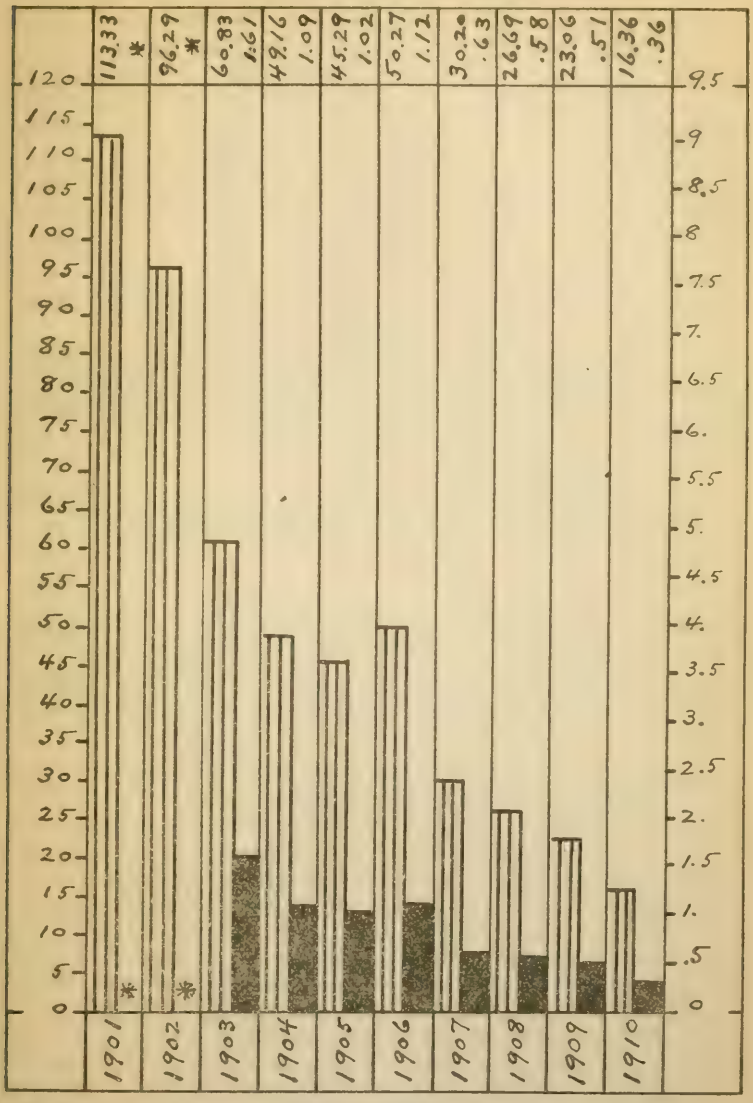


TABLE No. 26.—*The 10 posts in the United States having the highest admission rates for malarial diseases, year 1910.*

[Ratio per 1,000 of mean strength.]

	Mean strength.		Malarial diseases, total ratio.	
	1910	1909	1910	1909
Fort Washington, Md.	531	482	237.29	215.77
Fort Hunt, Va.	119	126	92.44	23.81
Fort Des Moines, Iowa	635	754	61.42	17.24
Fort Bliss, Tex.	246	318	56.91	15.72
Fort Logan H. Roots, Ark.	255	254	54.90	82.68
Fort Dade, Fla.	227	127	52.86	55.12
Fort Barry, Cal.	311	212	48.23	70.75
Jefferson Barracks, Mo.	1,002	1,052	42.91	137.83
West Point, N. Y.	754	668	41.11	110.78
Fort Fremont, S. C.	113	114	35.40	114.04
Total United States, continental (excluding Alaska)	55,680	57,124	16.36	23.06

NOTE.—Fort Walla Walla, Wash., and Boise Barracks, Idaho, gave the second and third highest rates for malarial diseases in the United States in 1910, 207.32 and 109.37, respectively, although no case was reported at either station in 1909.

The cases all occurred in soldiers of the First United States Cavalry joining those stations in February, 1910, directly from Camp Stotsenburg, P. I., where the rate for this disease was 627.95 per 1,000 of mean strength in 1909.

For this reason these two posts are omitted from above table, their high rates being attributable to the occurrence of the disease at Camp Stotsenburg.

Fort Washington, Md., this year as last stands first for malarial infections. The rate for 1910 was 237.29 as compared with 215.77 for 1909, and 144.30 for 1908, 363.64 for 1907, and 736 for 1906.

The chief surgeon remarks:

There is really but one post that is an opprobrium, Fort Washington, where malaria continues to prevail. Attention is invited to several interesting reports from that station, submitted during the year, looking to improved sanitary conditions. But it seems such a hopeless proposition. We have sanitated Cuba several times, Panama is a health resort, but Fort Washington, within 20 miles of the capital of our country, is a pest hole.

Its rate is higher than that of any post in the Philippines garrisoned by white troops, except Camp Stotsenburg.

The commanding officer in forwarding sanitary reports has frequently called attention to the dense undergrowth, almost tropical in character, which exists near the barracks and along roads much used by the men, and which if not removed will, it is feared, cause an increased prevalence of malaria. A board was appointed by the War Department during the early part of the year, composed of Lieut. Col. J. R. Kean, Medical Corps, Surgeon General's Office; Maj. F. F. Russell, Medical Corps, bacteriologist of the Army Medical School, and Capt. Robert H. C. Kelton, Coast Artillery Corps, post quartermaster, Fort Washington, Md. This board, assisted by an expert forester detailed by the Department of Agriculture, has visited the fort and studied the question thoroughly. The board concluded that the malarial mosquitoes at the post were bred almost exclusively in a little marsh adjoining the reservation, and that the acquisition and drainage of its area was the first step in malarial prevention. It was also recommended that a zone 125 yards wide be cleared of trees and shrubs immediately behind the barracks in the direction of the swamp. It is believed that there will be a great reduction in the admission rate for malarial fevers when these plans are fully put into execution.

Fort Hunt, Va., on the opposite side of the Potomac from Fort Washington, has the second highest rate, and Fort Des Moines, Iowa, the third.

UNDETERMINED FEVERS.

The admission rate for these fevers for the United States was 2.42, as compared with 2.15 for 1909, 3.80 for 1908, and 4.67 for 1907. The different diagnoses included under this heading and the number of admissions are given in the following table, which shows also their occurrence in the colonial possessions:

TABLE No. 27.—*Undetermined fevers, 1910, American troops, by countries. (Enlisted men.)*

Diseases.	United States.	Alaska.	Hawaii.	Philippine Islands.	Transports.	Total.
Febricula	55	.....	.....	66	.....	121
Fever, simple continued	7	.....	.....	14	3	24
Fever, type undetermined	64	.....	2	46	6	118
Ephemeral fever	7	.....	.....	4	.....	11
Thermic fever	2	.....	.....	2	.....	4
Total	135	.....	2	132	9	278
Ratios, year 1910	2.42	.....	1.64	10.75	7.18	3.89

TUBERCULOSIS.

The admission rate for tuberculosis, 3.52, and the death rate, 0.25, are both less than the rates 4.74 and 0.65 for 1909, and 4.08 and 0.40 for 1908. The discharge rate was, however, higher, being 4.01, as compared with 2.10 for 1909, 2.77 for 1908, and 2.77 for 1907. This high discharge rate as explained under discharge for disability was due to (1) the large number discharged at Fort Bayard during the early part of the year; (2) to the policy adopted of discharging all cases received there in a comparatively short time if the apparent chances for recovery are not good; and (3) the policy adopted by the War Department during the latter part of the year of discharging all cases of tuberculosis occurring during the first enlistment, instead of sending them to Fort Bayard. This policy is in accord with that in force in foreign armies. These soldiers are, however, informed that they may be admitted at Fort Bayard as beneficiaries of the Soldiers' Home if they so elect. As a result of the greater number and earlier discharges, the noneffective rate was very much lower, being 103.98 with a ratio of 1.87, as compared with 190. and 3.33 for 1909, and 139.83 and 3.02 for 1908. An outbreak of four cases of tuberculosis in Battery A, Second Field Artillery, was discovered at Vancouver Barracks on November 27. Prompt and thorough measures of disinfection were used in the barracks of the company and the guardhouse, where one of the patients had been in confinement.

To prevent overcrowding in barracks, squad rooms, and guardhouses the recommendation made for two years past is renewed, that upon the doors of dormitories and squad rooms should be posted the number of men who can be properly accommodated in such rooms.

Table No. 28 shows the movement of cases and also the distribution of this disease by countries:

TABLE No. 28.—*Occurrence of tuberculosis among American troops, Army, year 1910, by years of service—enlisted men.*

	During first year of service.	During second year of service.	During third year of service.	During fourth year of service.	During fifth year of service.	During sixth year of service.	Total.
United States, continental (excluding Alaska):							
Mean strength	7,116	12,446	12,578	3,882	3,648	16.010	55,680
Admitted	34	48	31	14	10	49	186
Ratio per 1,000 of mean strength	4.78	3.86	2.46	3.61	2.74	3.06	3.34
Duty	3	4	5	2	.....	7	21
Died	1	.....	2	1	.....	3	7
Discharged on certificate of disability	11	23	11	5	5	12	67
Otherwise	3	2	1	.....	1	.....	7
Remaining Dec. 31, 1910, cases	16	19	12	6	4	27	84
Philippines:							
Mean strength	530	1,585	3,863	684	891	4,724	12,277
Admitted	3	7	24	8	5	20	67
Ratio per 1,000 of mean strength	5.66	4.42	6.21	11.70	5.61	4.23	5.46
Duty	.....	.....	1	.....	.....	1	2
Died	.....	.....	1	1	.....	2	4
Discharged on certificate of disability	2	6	14	4	1	1	28
Otherwise	.....	.....	.....	.....	.....	1	1
Remaining Dec. 31, 1910, cases	1	1	8	3	4	15	32
Alaska:							
Mean strength	25	102	270	83	91	510	1,081
Admitted	.....	.....	1	.....	.....	1	2
Ratio per 1,000 of mean strength	.....	.....	3.70	.....	.....	1.96	1.85
Discharged on certificate of disability	.....	.....	1	.....	.....	.....	1
Remaining Dec. 31, 1910, cases	.....	.....	.....	.....	.....	1	1
Hawaii:							
Mean strength	127	326	381	43	76	267	1,220
Admitted	1	.....	.....	.....	1	3	5
Ratio per 1,000 of mean strength	7.87	.....	.....	.....	13.16	11.24	4.10
Duty	.....	.....	.....	.....	.....	1	1
Discharged on certificate of disability	1	.....	.....	.....	.....	.....	1
Remaining Dec. 31, 1910, cases	.....	.....	.....	.....	1	2	3
Porto Rico (only 23 American soldiers, with no cases), mean strength	.....	1	4	.....	4	14	23
Transports:							
Mean strength	63	180	446	85	81	398	1,253
Admitted	.....	.....	.....	.....	.....	1	1
Ratio per 1,000 of mean strength	.....	.....	.....	.....	.....	2.51	.80
Died	.....	.....	.....	.....	.....	1	1
Total Army:							
Mean strength	7,861	14.640	17,542	4,777	4,791	21,923	71,534
Admitted[1]	38	55	56	22	16	74	261
Ratio per 1,000 of mean strength	4.83	3.76	3.19	4.61	3.34	3.38	3.65
Duty	3	4	6	2	.....	9	24
Died	1	.....	3	2	.....	6	12
Discharged on certificate of disability	14	29	26	9	6	13	97
Otherwise	3	2	1	.....	1	1	8
Remaining Dec. 31, 1910, cases	17	20	20	9	9	45	120

[1] Of the 271 cases admitted in 1910, 10 were returned to duty and readmitted, leaving 261 individuals to be accounted for, giving a ratio of 3.65 per 1,000 of mean strength.

Table No. 29 shows the posts having more than one case for 1910, and also those for 1909, for purpose of comparison. Taken in connection with the data above given as to its occurrence in organizations, it seems clear that prevalence of tuberculosis in a post, as well as in a company, one year does not to a marked extent influence its occurrence in the following year.

CHART N.—*Showing the relative admission and death ratios per thousand of mean strength for tuberculosis in the Army, by years, since 1897.*

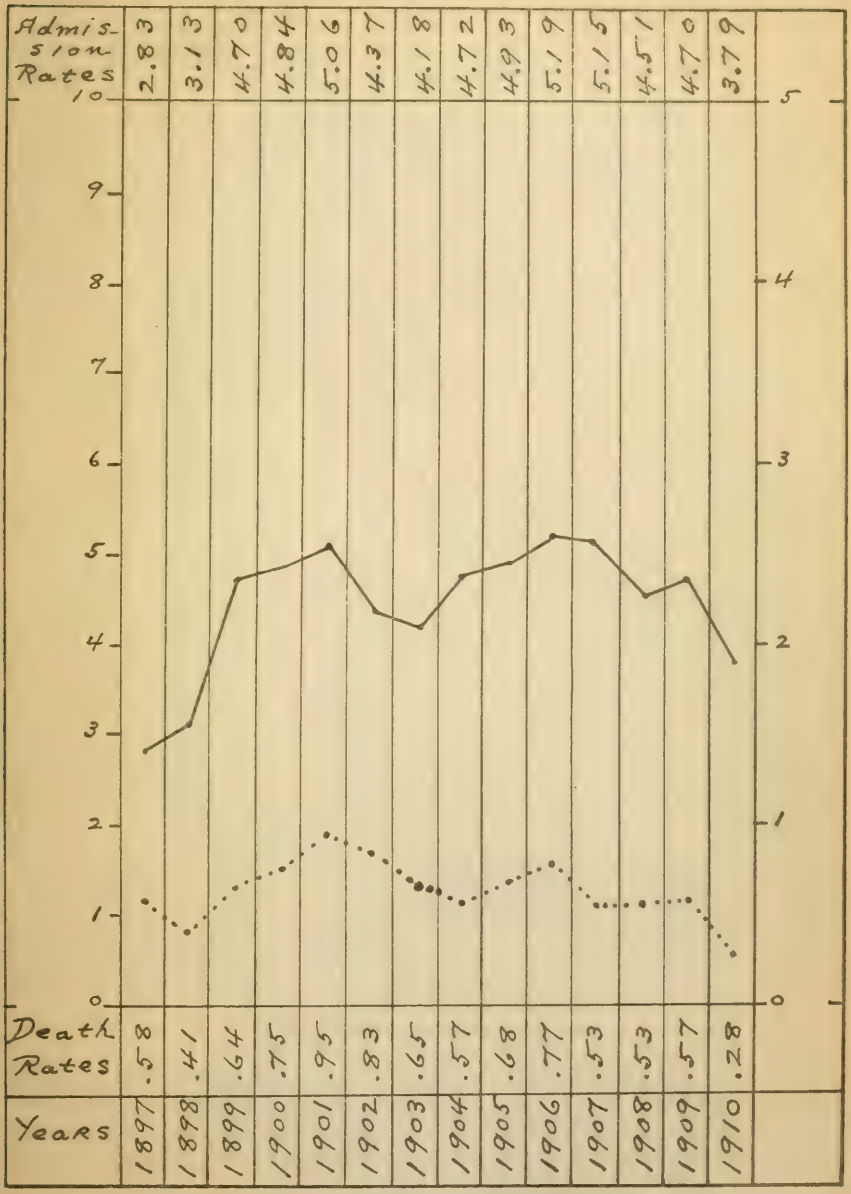


TABLE NO. 29.—*Tuberculosis at Army stations, United States, continental (excluding Alaska), year 1910 compared with 1909—enlisted men.*

	Admissions, year 1910.		Admissions, year 1909.	
	Number.	Ratios per 1,000 of mean strength.	Number.	Ratios per 1,000 of mean strength.
Presidio of San Francisco, Cal.	13	5.42	14	5.73
General Hospital, San Francisco, Cal.	9	31.47	8	29.41
Vancouver Barracks, Wash.	9	7.98	3	2.28
Fort D. A. Russell, Wyo.	8	3.48	3	1.54
General hospital, Fort Bayard, N. Mex.	7	56.91	7	55.56
Fort Slocum, N. Y.	7	7.24	8	7.41
Fort Benjamin Harrison, Ind.	6	7.70	7	8.08
Fort Baker, Cal.	5	11.79	3	6.19
Columbus Barracks, Ohio.	5	4.80	9	8.10
Jefferson Barracks, Mo.	5	5.10	3	2.85
Fort Monroe, Va.	5	4.09	13	10.49
Fort Myer, Va.	4	4.97	2	2.68
Fort Robinson, Nebr.	4	8.68	16	30.95
Fort Sam Houston, Tex.	4	2.51	7	3.86
Fort Snelling, Minn.	4	3.99	4	3.61
Alcatraz Island, Cal.	3	18.63	.....	.....
Boise Barracks, Idaho.	3	25.42	2	17.86
Fort Des Moines, Iowa.	3	4.95	.....	.....
Fort Du Pont, Del.	3	5.70	3	6.40
Fort Lincoln, N. Dak.	3	15.63	2	6.80
Fort Porter, N. Y.	3	12.15	.....	.....
Fort Thomas, Ky.	3	6.40	.....	.....
Washington Barracks, D. C.	3	5.58	.....	.....
Fort Leavenworth, Kans.	3	1.55	18	7.81
Fort Riley, Kans.	2	1.02	8	3.55
Fort Totten, N. Y.	1	1.38	7	9.42
Fort Walla Walla, Wash.	1	6.37	6	30.61
Fort Worden, Wash.	.....	.....	6	8.47
Fort Barrancas, Fla.	2	3.48	5	8.21
Fort William Henry Harrison, Mont.	1	5.41	5	17.24
Fort Douglas, Utah.	1	1.41	4	5.28
Fort McPherson, Ga.	.....	.....	4	5.72
Madison Barracks, N. Y.	.....	.....	4	8.53
Presidio of Monterey, Cal.	2	2.10	4	4.29
Fort Crook, Nebr.	2	4.41	3	6.64
Fort George Wright, Wash.	1	2.42	3	6.20
Fort Hamilton, N. Y.	2	3.82	3	5.63
Fort Jay, N. Y.	2	6.35	3	7.96
Fort Missoula, Mont.	.....	.....	3	11.24
Fort Niagara, N. Y.	2	6.78	3	9.58
Plattsburg Barracks, N. Y.	2	2.90	3	5.43
Fort Sheridan, Ill.	1	.94	3	3.18
Fort Sill, Okla.	.....	.....	3	6.62
West Point, N. Y.	.....	.....	3	4.49
Fort Williams, Me.	2	4.23	3	6.70
10 posts, not included above, had 2 cases each in 1910.	20	.....	.....	.....
10 posts, not included above, had 2 cases each in 1909.	.....	.....	20	.....
20 posts, not included above, had 1 case each in 1910.	20	.....	.....	.....
29 posts, not included above, had 1 case each in 1909.	.....	.....	29	.....
Camps of instructions and field, etc., in 1910.	10	.....	.....	.....
Field, etc., not included above, in 1909.	.....	.....	4	.....
Total.	196	3.52	271	4.74

CEREBROSPINAL MENINGITIS.

Four cases of this disease, with 3 deaths, occurred during the year. In 1909 and 1908 there were 13 cases each with 7 deaths, and in 1907 there were 33 cases with 30 deaths. One case occurred each at Fort Benjamin Harrison, Ind.; Columbus Barracks, Ohio; Fort Worden, Wash.; and Fort Assinniboine, Mont.

The case at Benjamin Harrison was secondary to the one at Columbus Barracks. He was a Hospital Corps man who attended the case at Columbus Barracks before his transfer to Benjamin Harrison. This was the one case that recovered, having received prompt treatment with Flexner's antimeningicoccic serum.

INSANITY.

The admission rate for insanity for the United States was 1.58 per 1,000, as compared with 1.63 for 1909, 1.58 for 1908, and 1.79 for 1907. The constant noneffective was 17.88, with a ratio of 0.32 per 1,000. In 1909 it was 16.66, with a ratio of 0.29, and in 1908, 14.24, with a ratio of 0.31.

ALCOHOLISM IN THE UNITED STATES.

The admission rate for alcoholism for the United States for the year 1910 was 23.51 per 1,000, which is an improvement over the preceding year, when it was 25 per 1,000. It is gratifying to observe that this rate has shown a steady diminution for the last four years following an equally steady rise for the eight years prior to 1907. This rise was synchronous with the enormous increase in the venereal rate beginning also in 1899, and it is difficult to escape the conclusion that there has been some connection between the two.

It is of interest to observe the alcoholic rates for the last 31 years, dividing this time into three periods of a decade each: (*a*) prior to the establishment of the canteen in 1890; (*b*) the period of 11 years covering the time when the sale of beer was permitted, and (*c*) the decade since the prohibition of such sales at the beginning of 1901. (In the consideration of this period of 31 years the tropical possessions of the United States have been excluded because the conditions in them are special and prevent a fair comparison with the statistics before the acquisition of foreign territory by this Government.) The average admission rate for the decade preceding the canteen was 55 per 1,000; for the canteen period it was 26 per 1,000, and for the decade since the abolition of the canteen, 28 per 1,000. A study of the rates shows a steady fall from 1882 and 1883, when it was 69 per 1,000, down to include 1898, when it reached its lowest point, 16 per 1,000. This was followed by a rise as shown in chart L, covering eight years, followed by a fall. It will be observed that the improvement in the alcoholic rate began before the establishment of the canteen and was continued during most of the canteen period. It is believed that this corresponds to the general progress of temperance in the United States and that it would have been sustained but for the undoubtedly injurious effect of the abolition of the canteen, which destroyed the attractiveness of the soldier's club and compelled him to go outside of the limits of the military post for amusement. In this way he is tempted to drink distilled liquors to excess in place of mild fermented liquors in moderation.

SMALLPOX.

Twelve cases of smallpox occurred during the year. There was one death. During the year 1909 there were only two cases, without a death. Four of these cases in 1910 occurred at Fort George Wright, Wash., in February. The infection was acquired in the city of Spokane, where smallpox was present at that time. There appeared to be connection between individual cases in only one instance. Three cases occurred at Fort McPherson, Ga., in April. The source of the infection here was probably the city of Atlanta. One other case also occurred at this post in May. There were two cases at

Fort Myer; one in April and one in May. There was one case at Fort Duchesne in January and one at Vancouver Barracks in December.

MEASLES.

During the year 1910, 317 cases of measles occurred in the United States with only one death. A severe epidemic with considerable mortality has, however, occurred at Columbus Barracks during the current year 1911. Epidemics of this character occur rather frequently at the large recruiting depots.

The following extract is from the report furnished by Capt. Arthur C. Christie of the epidemic at Columbus Barracks, Ohio, which occurred there during the latter part of 1910 and the first part of 1911:

Since the 24th of last December there have been 202 cases of measles at Columbus Barracks, and a report of this epidemic is of some interest on account of the great severity of the disease and the number of complications during the latter half of the period. During the first month and a half the disease ran a very mild course, with few complications and those not serious. Up to February 16 there were 76 cases of measles, 2 of them being complicated with broncho-pneumonia, 3 with otitis media, and 1 with plastic pleurisy; none of these cases were severe and all of them made good recoveries. About the middle of February the disease suddenly assumed a serious aspect and many of the cases had severe complications. There seems to be no way to explain this sudden change in the character of the disease. The weather conditions seemed no more unfavorable than they were before, the garrison was no more crowded than it had been during the preceding month, and there was no material change in the treatment of the cases. The patients were isolated in roomy wards and care was taken that each patient should have at least 2,000 cubic feet of air space; the wards were well ventilated but kept at an even temperature, and with sufficient moisture present. But notwithstanding the fact that no change could be seen in the conditions present, the disease suddenly became virulent and many serious complications occurred. That there was an increase in the virulence of the infection is indicated by the fact that during this latter part of the epidemic many cases were seen to be serious from the start. Even during the catarrhal stage there was great prostration, very serious bronchitis, and early tendency to lung involvement. The first death occurred on February 16, and since that time we have had 126 cases of the disease with a total of 16 deaths.

The following complications occurred during this epidemic:

Broncho-pneumonia	23	Meningitis	1
Pleurisy with effusion	11	Pericarditis with effusion	3
Otitis media	13	Abscess of lungs	2
Mastoiditis	3	Miliary tuberculosis	1

One case had appendicitis as an intercurrent disease, was operated on, and made a good recovery. At autopsy one case was found to have a large tubercular abscess in the apex of each lung, and two had healed tubercular nodules. Death was caused in four cases by broncho-pneumonia alone; in one case by meningitis; in four cases by broncho-pneumonia and pleurisy with effusion; in one case by empyema, which died in spite of rib resection and thorough drainage; two cases with broncho-pneumonia and multiple abscesses in the lungs; one case with broncho-pneumonia and tubercular abscesses; and two cases with broncho-pneumonia, pleurisy with effusion, pericarditis with effusion, and one case with miliary tuberculosis.

Otitis media was a complication in 7.1 per cent of the cases. Mastoid disease was a complication in three cases.

DIPHTHERIA.

A rather extensive epidemic of diphtheria occurred at Madison Barracks, N. Y., among the officers and their families during the early part of the present year. There were 16 cases, with no deaths. This epidemic was carefully investigated by Capt. Frank W. Weed, Medical Corps, assisted by Lieut. E. C. Hill, Medical Corps. It was

their opinion that the first case that occurred in the post during this epidemic, a child of one of the officers, contracted the infection from a man working in a butcher shop in the neighboring town of Sacketts Harbor. The other cases were believed to be secondary to this one. Maj. Greenleaf, the surgeon, who was temporarily away, later investigated this epidemic and was of the opinion that the primary case was that of a child of an officer who returned to the post from Philadelphia several months before and later developed an attack of diphtheria. Between that case and the epidemic referred to above there were several sporadic cases occurring at intervals and bridging over the time between. All the cases were given antitoxin. Strict quarantine was maintained and all contacts given prophylactic doses of antitoxin.

Thirteen cases of diphtheria occurred at Fort Slocum, N. Y., during the latter part of August and September, 1910. A carrier was discovered whom it was believed was responsible for this outbreak.

There were 12 cases at the Presidio of San Francisco, Cal. Five of these were infected by a carrier.

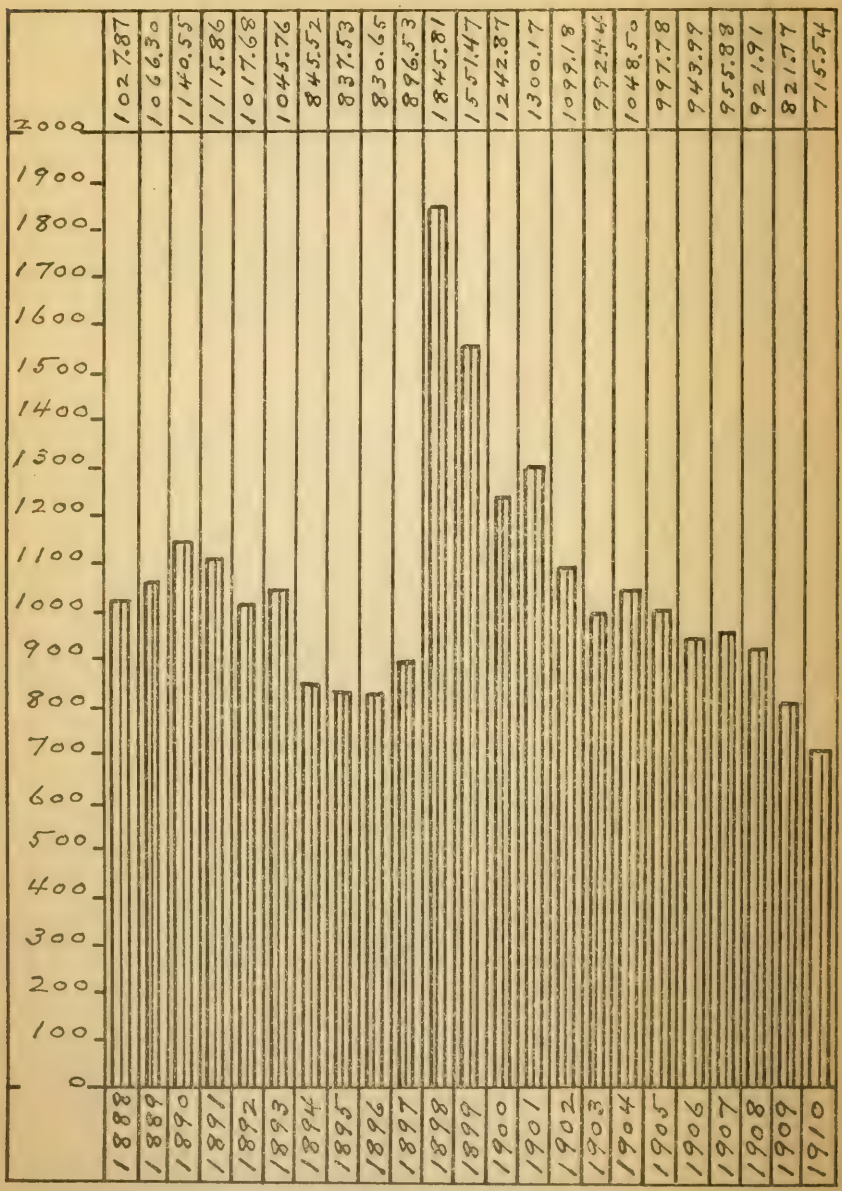
INFLUENCE OF STATION.

The post having the highest admission rate this year was Fort Mott, N. J., which post also had this unenviable record for 1908 and 1909. Jackson Barracks, La., has the highest noneffective rate and the second highest admission rate. Fort Worden, Wash., had the lowest admission rate from all causes for the year, while Fort Rosecrans was next to the lowest. Fort Niagara had the lowest noneffective rate from all causes for the year, and Fort Warren, Mass., was next to the lowest. Of the recruiting depots, Columbus Barracks had the highest admission rate from all causes and the highest death rate. Fort Slocum had the highest total noneffective rate, the highest average number of days lost in hospital, and the highest rate for total losses.

The Department of the Lakes had the highest admission rate, and the Department of Texas the lowest. The highest death rate was in the Department of Texas and the lowest in the Department of the Columbia. The Department of Texas had the highest number of days lost for each admission and the Department of California the lowest. The Department of Dakota had the highest number of days for each soldier and the Department of California the lowest.

The tables following, Nos. 30 and 31, show the posts having the highest and lowest ratios for admission and noneffectiveness in the United States as a whole.

CHART O.—*Showing the total admission rate for disease, by years, since 1888 for the United States proper.*



Military departments, United States, continental (excluding Alaska), showing the relative admission, death, and discharge rates for disease.

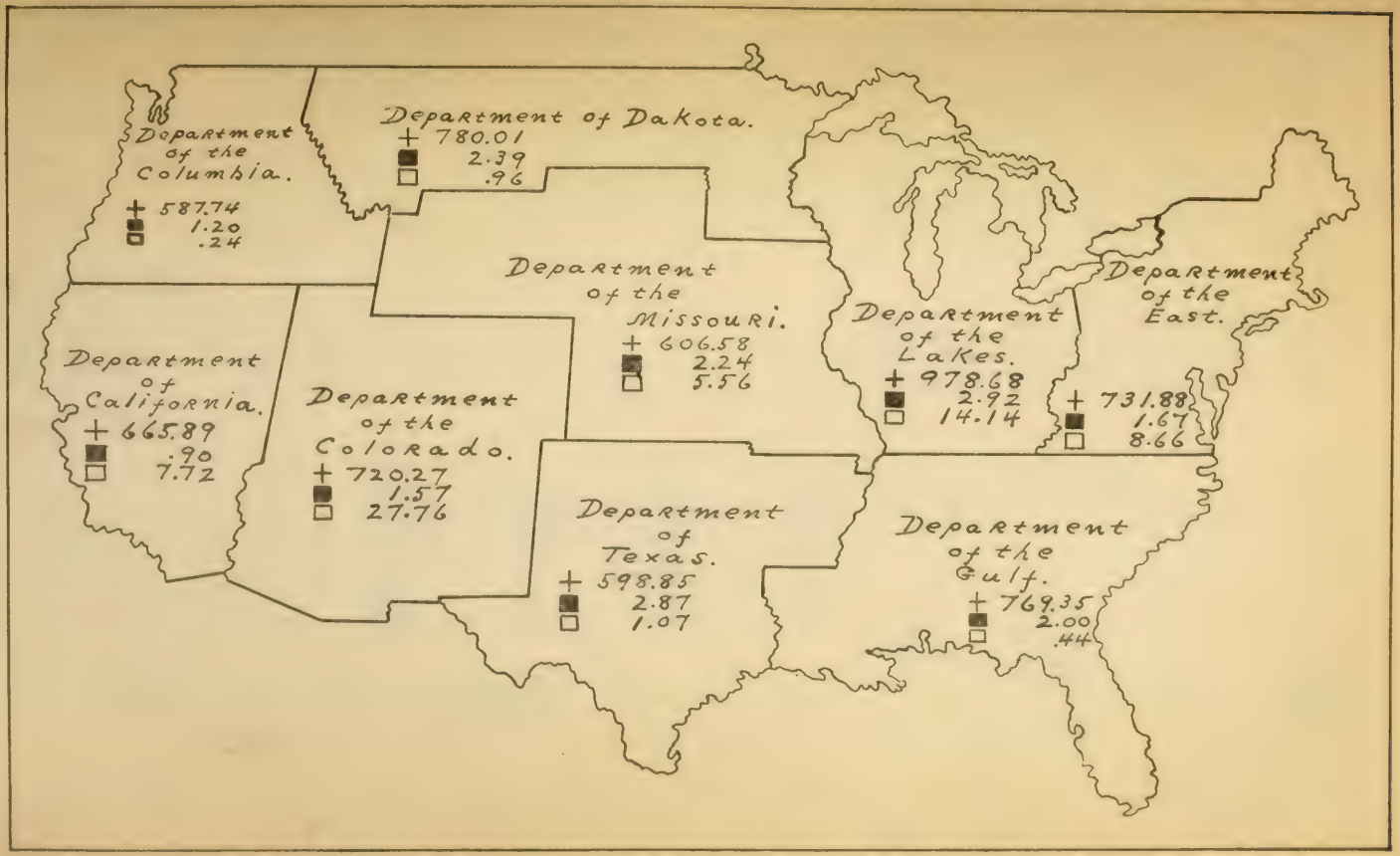


TABLE No. 30.—*Posts having the highest admissions and noneffective rates, 1910.*[1]

	Mean strength.	Ratio per 1,000 of mean strength.										Average number of days lost.			
		Admissions to sick report.		Discharged on certificate of disability.		Deaths.		Total losses.		Noneffective from sickness.				From all causes.		Excluding injuries, venereal diseases, alcoholism, and vaccinia.	
										From all causes.		Excluding injuries, venereal diseases, alcoholism, and vaccinia.					
		From all causes.	Excluding injuries, venereal diseases, alcoholism, and vaccinia.	From all causes.	Excluding injuries, venereal diseases, alcoholism, and vaccinia.	From all causes.	Excluding injuries, venereal diseases, alcoholism, and vaccinia.	From all causes.	Excluding injuries, venereal diseases, alcoholism, and vaccinia.	Total.	In hospital.	Total.	In hospital.	For each soldier.	For each case.	For each soldier.	For each case.
Highest admission rates from all causes.																	
Fort Mott, N. J.	221	1,588.24	1,104.07	.....	.....	9.05	.....	9.05	.....	28.07	23.74	14.33	12.07	10.24	6.45	5.23	4.74
Jackson Barracks, La.	211	1,459.72	1,033.18	.....	.....	.....	.....	.....	.....	43.62	42.71	21.52	20.83	15.92	10.91	7.85	7.60
Fort Des Moines, Iowa.	635	1,278.74	677.17	.....	.....	11.02	4.72	11.02	4.72	30.96	24.89	15.50	12.77	11.30	8.84	5.66	8.35
Fort Assiniboine, Mont.	209	1,267.94	703.35	.....	.....	4.78	4.78	4.78	4.78	41.62	31.74	18.85	13.57	15.19	11.98	6.88	9.78
Fort Terry, N. Y.	436	1,252.29	788.99	.....	.....	2.29	.....	2.29	.....	31.41	26.57	13.00	10.31	11.46	9.15	4.75	6.01
Highest admission rates, excluding venereal diseases, injuries, etc.																	
Fort Mott, N. J.	221	1,588.24	1,104.07	.....	.....	9.05	.....	9.05	.....	28.07	23.74	14.33	12.07	10.24	6.45	5.23	4.74
Jackson Barracks, La.	211	1,459.72	1,033.18	.....	.....	.....	.....	.....	.....	43.62	42.71	21.52	20.83	15.92	10.91	7.85	7.60
Fort Baker, Cal.	434	1,218.89	794.93	.....	.....	4.61	2.30	4.61	2.30	21.78	19.44	12.20	11.22	7.95	6.52	4.45	5.60
Fort Terry, N. Y.	436	1,252.29	788.99	.....	.....	2.29	.....	2.29	.....	31.41	26.57	13.00	10.31	11.46	9.15	4.75	6.01
Fort Caswell, N. C.	342	1,099.42	751.46	.....	.....	8.77	2.92	8.77	2.92	33.91	28.15	20.05	17.37	12.38	11.26	7.32	9.74
Highest noneffective rates from all causes.																	
Jackson Barracks, La.	211	1,459.72	1,033.18	.....	.....	.....	.....	.....	.....	43.62	42.71	21.52	20.83	15.92	10.91	7.85	7.60
Fort Moultrie, S. C.	486	1,174.90	641.98	.....	.....	4.12	.....	4.12	.....	42.47	35.87	18.69	15.06	15.50	13.19	6.82	10.63
Fort Crook, Nebr.	479	1,077.24	609.60	4.41	4.41	4.18	2.09	8.59	6.50	41.62	35.36	17.70	15.00	15.19	14.10	6.46	10.60
Fort Assiniboine, Mont.	209	1,267.94	703.35	.....	.....	4.78	4.78	4.78	4.78	41.62	31.74	18.85	13.57	15.19	11.98	6.88	9.78
Fort Morgan, Ala.	395	1,205.06	726.58	.....	.....	.....	.....	.....	.....	40.01	31.78	19.69	14.94	14.60	12.12	7.19	9.89

Highest noneffective rates, excluding venereal diseases, injuries, etc.																
Jackson Barracks, La	211	1,459.72	1,033.18	.....	.....	.....	.....	.....	.....	43.62	42.71	21.52	20.83	15.92	10.91	7.85	7.60
Fort Caswell, N. C	342	1,099.42	751.46	.....	.....	8.77	2.92	8.77	2.92	33.91	28.15	20.05	17.37	12.38	11.26	7.32	9.74
Fort George Wright, Wash	439	797.27	482.92	.....	.....	2.28	.....	2.28	.....	36.12	31.51	19.92	17.82	13.18	16.54	7.27	15.06
Fort Morgan, Ala	395	1,205.06	726.58	.....	.....	.....	.....	.....	.....	40.01	31.78	19.69	14.94	14.60	12.12	7.19	9.89
Fort Snelling, Minn	1,055	1,015.17	527.96	1.00	1.00	4.74	2.84	5.74	3.84	39.88	31.49	19.62	15.51	14.55	14.34	7.16	13.56

[1] Recruit depots not considered.

TABLE No. 31.—*Posts having the lowest admission and noneffective rates, 1910.*

	Mean strength.	Ratio per 1,000 of mean strength.												Average number of days lost.			
		Admissions to sick report.		Discharged on certificate of disability.		Deaths.		Total losses.		Noneffective from sickness.				From all causes.		Excluding injuries, venereal diseases, alcoholism, and vaccinia.	
										From all causes.		Excluding injuries, venereal diseases, alcoholism, and vaccinia.					
		From all causes.	Excluding injuries, venereal diseases, alcoholism, and vaccinia.	From all causes.	Excluding injuries, venereal diseases, alcoholism, and vaccinia.	From all causes.	Excluding injuries, venereal diseases, alcoholism, and vaccinia.	From all causes.	Excluding injuries, venereal diseases, alcoholism, and vaccinia.	Total.	In hospital.	Total.	In hospital.	For each soldier.	For each case.	For each soldier.	For each case.
Lowest admission rates from all causes.																	
Fort Worden, Wash	715	363.64	187.41	1.44	.....	4.20	2.80	5.64	2.80	16.37	15.41	6.55	5.87	5.98	16.43	2.39	12.76
Fort Rosecrans, Cal	229	419.21	244.54	.....	.....	4.37	4.37	4.37	4.37	19.06	18.78	7.38	7.31	6.96	16.59	2.69	11.02
Fort Casey, Wash	330	457.58	281.82	.....	.....	.....	.....	.....	.....	20.67	19.41	9.07	8.77	7.55	16.49	3.31	11.75
Fort Niagara, N. Y	307	498.37	302.93	.....	.....	3.26	.....	3.26	.....	14.48	13.90	8.75	8.47	5.28	10.60	3.20	10.55
Fort Jay, N. Y	361	504.16	357.34	3.17	3.17	5.54	.....	8.71	3.17	19.39	16.84	12.19	10.43	7.08	14.04	4.45	12.45
Lowest admission rates, excluding injuries, etc.																	
Fort Worden, Wash	715	363.64	187.41	1.44	.....	4.20	2.80	5.64	2.80	16.37	15.41	6.55	5.87	5.98	16.43	2.39	12.76
Fort Rosecrans, Cal	229	419.21	244.54	.....	.....	4.37	4.37	4.37	4.37	19.06	18.78	7.38	7.31	6.96	16.59	2.69	11.02
Fort Casey, Wash	330	457.58	281.82	.....	.....	.....	.....	.....	.....	20.67	19.41	9.07	8.77	7.55	16.49	3.31	11.75
Fort Hancock, N. J	864	519.68	296.30	.....	.....	3.47	2.31	3.47	2.31	16.96	15.20	8.02	7.05	6.19	11.91	2.93	9.88
Fort Niagara, N. Y	307	498.37	302.93	.....	.....	3.26	.....	3.26	.....	14.48	13.90	8.75	8.47	5.28	10.60	3.20	10.55
Lowest noneffective rates from all causes.																	
Fort Niagara, N. Y	307	498.37	302.93	.....	.....	3.26	.....	3.26	.....	14.48	13.90	8.75	8.47	5.28	10.60	3.20	10.55
Fort Warren, Mass	228	552.63	320.18	.....	.....	.....	.....	.....	.....	15.78	14.12	8.12	7.62	5.76	10.42	2.96	9.26
Fort Worden, Wash	715	363.64	187.41	1.44	.....	4.20	2.80	5.64	2.80	16.37	15.41	6.55	5.87	5.98	16.43	2.39	12.76
Fort Wadsworth, N. Y	431	554.52	322.51	.....	.....	2.32	.....	2.32	.....	16.80	13.87	7.48	6.69	6.13	11.06	2.73	8.46
Fort Hancock, N. J	864	519.68	296.30	.....	.....	3.47	2.31	3.47	2.31	16.96	15.20	8.02	7.05	6.19	11.91	2.93	9.88

Lowest noneffective rates, excluding injuries, etc.																	
Fort Worden, Wash	715	363.64	187.41	1.44	.....	4.20	2.80	5.64	2.80	16.37	15.41	6.55	5.87	5.98	16.43	2.39	12.76
Fort Rosecrans, Cal	229	419.21	244.54	.....	.....	4.37	4.37	4.37	4.37	19.06	18.78	7.38	7.31	6.96	16.59	2.69	11.02
Fort Wadsworth, N. Y	431	554.52	322.51	.....	.....	2.32	.....	2.32	.....	16.80	13.87	7.48	6.69	6.13	11.06	2.73	8.46
Fort Hancock, N. J	864	519.68	296.30	.....	.....	3.47	2.31	3.47	2.31	16.96	15.20	8.02	7.05	6.19	11.91	2.93	9.88
Fort Warren, Mass	228	552.63	320.18	.....	.....	.....	.....	.....	.....	15.78	14.12	8.12	7.62	5.76	10.42	2.96	9.26
RECRUIT DEPOTS.																	
Columbus Barracks, Ohio	1,066	2,038.46	1,261.73	63.34	52.78	4.69	4.69	68.03	57.47	45.65	44.17	28.59	27.71	16.66	8.17	10.43	8.27
Jefferson Barracks, Mo	1,002	954.09	452.10	69.32	36.70	3.99	2.00	73.31	38.70	44.85	43.82	16.09	15.66	16.37	17.16	5.87	12.99
Fort Slocum, N. Y	990	1,998.99	1,388.89	160.29	108.58	3.03	2.02	163.32	110.60	61.81	57.61	37.56	35.16	22.56	11.29	13.71	9.87
Fort McDowell, Cal	602	1,142.86	566.45	84.19	54.98	1.66	.....	85.85	54.98	32.19	27.48	17.79	15.82	14.75	10.28	6.49	11.46
Fort Logan, Colo	519	1,256.26	859.34	120.00	80.00	3.85	3.85	123.85	83.85	44.97	41.59	29.78	28.06	16.41	13.06	10.87	12.65

INFLUENCE OF AGE AND LENGTH OF SERVICE.

As usual, the admission and discharge and noneffective rates were highest for the youngest soldiers and those serving their first enlistment, and the death rate was highest among those 45 years of age or over having 10 years or more service. The lowest admission rate occurred in soldiers between 45 and 50 years of age, and the lowest constantly noneffective rate in those between 35 and 40.

The following table exhibits the effects of age and length of service upon rates for disease:

TABLE NO. 32.—*Influence of disease on troops serving in the United States, continental (excluding Alaska), by age and length of service, year 1910.*

Length of service.	Mean strength.	Admitted.	Discharged on certificate of disability.	Died.	Constantly noneffective.	Ratios per 1,000 of mean strength. Admitted.	Discharged on certificate of disability.	Died.	Constantly noneffective.
Under 1 year	7,116	9,506	228	14	317.64	1,335.86	32.04	1.97	44.64
1 to 2 years	12,446	8,538	188	11	375.92	686.00	15.11	.88	30.20
2 to 3 years	12,578	9,099	98	14	352.51	723.41	7.79	1.11	28.03
3 to 4 years	3,882	2,290	33	4	96.24	589.90	8.50	1.03	24.79
4 to 5 years	3,648	1,722	40	8	75.08	472.04	10.96	2.19	20.03
5 to 10 years	8,623	5,187	104	26	216.75	601.53	12.06	3.02	25.14
10 years and over	7,387	3,499	72	51	151.40	473.67	9.75	6.90	20.50
Total	55,680	39,841	763	128	1,583.55	715.54	13.70	2.30	28.44

Age.	Mean strength.	Admitted.	Discharged on certificate of disability.	Died.	Constantly noneffective.	Ratios per 1,000 of mean strength. Admitted.	Discharged on certificate of disability.	Died.	Constantly noneffective.
19 years and under	1,774	1,977	34	.....	60.87	1,114.43	19.17	.....	34.31
20 to 24 years	22,633	20,068	320	33	757.71	886.67	14.14	1.46	33.48
25 to 29 years	15,796	10,195	223	21	432.96	645.42	14.12	1.33	27.41
30 to 34 years	8,218	4,152	104	17	178.32	505.23	12.66	2.07	21.70
35 to 39 years	3,851	1,804	49	22	78.82	468.46	12.72	5.71	20.47
40 to 44 years	2,027	963	18	21	41.83	475.09	8.88	10.36	20.64
45 to 49 years	971	451	8	9	20.88	464.47	8.24	9.27	21.51
50 years and over	410	231	7	5	12.17	563.41	17.07	12.20	29.68
Total	55,680	39,841	763	128	1,583.55	715.54	13.70	2.30	28.44

INFLUENCE OF SEASON.

Excluding venereal diseases, alcoholism, and injuries, the highest admission was in March, the highest noneffective and death rate in February. The lowest admission and noneffective rates occurred in June and the lowest death rate in October. The following table (No. 33) shows the movement of sick by months. A study of these data for previous years shows a wide variation in the months showing the several highest and lowest rates. It can be stated, however, in general terms that all rates are highest in the first half of the year and lowest in the second half. February and March give the highest constantly noneffective rates and June–July the lowest.

TABLE No. 33.—*Influence of season, United States, continental (excluding Alaska), year 1910.*

Month.	Mean strength.	Ratio per 1,000 of mean strength.								Prevailing diseases (exclusive of venereal diseases, etc.).
		All causes.					Exclusive of venereal diseases, alcoholism, vaccinia, and injuries.			
		Admissions.		Deaths.	Noneffective.		Admissions.	Deaths.	Noneffective.	
		Total.	Hospital.		Total.	Hospital.				
January	58,107	80.59	64.04	0.29	38.28	34.81	48.62	0.21	20.11	Tonsillitis, 602; acute bronchitis, 217; muscular rheumatism, 119.
February	58,282	80.96	65.02	.29	37.92	34.37	51.82	.24	20.76	Tonsillitis, 578; acute bronchitis, 246.
March	57,790	93.63	72.62	.35	37.14	33.42	61.83	.21	20.57	Tonsillitis, 552; acute bronchitis, 261; constipation, 113.
April	56,801	77.50	60.42	.33	34.46	30.87	46.51	.18	18.37	Tonsillitis, 359; acute bronchitis, 120.
May	57,796	68.66	54.59	.40	32.40	29.49	37.62	.17	16.47	Tonsillitis, 233; acute bronchitis, 103.
June	56,414	63.83	49.95	.46	30.89	28.01	33.43	.18	14.99	Tonsillitis, 145; diarrhea and enteritis, 134.
July	53,400	72.57	49.74	.77	31.65	28.06	40.24	.19	16.04	Diarrhea and enteritis, 315; dyspepsia, 160; furuncles, 127.
August	51,200	73.50	46.66	.41	31.86	27.81	42.77	.12	16.91	Diarrhea and enteritis, 273; tonsillitis, 135; furuncles, 125.
September	53,874	70.59	54.33	.28	32.42	29.33	39.09	.19	17.07	Diarrhea and enteritis, 163; tonsillitis, 149; malaria, 124.
October	54,640	71.56	56.81	.26	33.16	30.08	38.38	.11	17.12	Tonsillitis 160; diarrhea and enteritis, 139; acute bronchitis, 110.
November	54,969	69.76	56.10	.27	33.93	30.78	37.00	.20	17.35	Tonsillitis, 234; acute bronchitis, 148.
December	54,880	74.73	62.41	.33	33.00	30.48	43.17	.18	17.64	Tonsillitis, 381; acute bronchitis, 184.
Total	55,680	899.25	695.40	4.42	33.95	30.66	521.98	2.17	17.80	Tonsillitis, 3,639; acute bronchitis, 1,686; diarrhea and enteritis, 1,679.

INFLUENCE OF RACE.

For 1910 the rates for noneffective, admission, and discharges were higher for the white troops and the death rate higher for the colored troops in the United States (continental). This is the same as last year, except that then the colored troops had the higher rate for discharge.

The relative prevalence of the several diseases in the two races are shown in Tables Nos. 61 and 62 at the end of the report.

SANITATION

A review of the monthly sanitary reports for the year shows surprisingly few sanitary defects, and when the attention of high authorities is called to them by these reports, they are usually corrected with promptness, except in cases where large appropriations of money are required

The number of cases of overcrowding reported is noticeably less than in 1909 or previous years Overcrowding and defective ventilation is reported with regard to the old barracks at Fort Robinson, Nebr., at Fort Dade, Fla., and at Fort Mason, Cal., but at the latter post, where the barracks are very old, the principal difficulty is in the ventilation, to which overcrowding was added in the case of the guardhouse. The surgeon and the post commander agree that it will be impossible to supply satisfactory ventilation to these buildings without the use of electric lights in place of petroleum. As electricity is brought onto the reservation it would seem that this reasonable recommendation should be carried out. The same difficulty has been reported from Fort Porter, N. Y., where the barracks are too small and the inadequate supply of fresh air is drawn upon and vitiated by gaslights. This office has recommended that electricity, which is available, should be introduced into these barracks, but as yet no favorable action has been taken in the matter.

Maj. Dutcher, surgeon, Plattsburg Barracks, speaking of "influenza" at that post, expresses his belief that almost all such are influenza nostras and not vera. They are contagious "bad colds," in which the infectious material is disseminated by coughing, spitting, sneezing, etc. He states that he is making an effort to reduce the number of such cases this winter by recommending that thorough ventilation be insisted upon in the various buildings used and occupied by troops, and that the dust of the floors, instead of being swept, be taken up with damp sawdust. This latter procedure is being carried out in the gymnasium, when the men drill, and where he believes the transmission of infection principally takes place.

ILL-FITTING SHOES.

Several medical officers have called attention to the fact that too little attention is paid to the issue of shoes of the proper sizes to soldiers. The medical officer, Fort Banks, Mass., at the semimonthly physical inspection, measured the feet of 192 men, and found that 96, or 50 per cent of those examined, wore shoes which were too short. The medical officer at Fort Totten found that of 595 men whose shoes were examined, 43 were correct in all respects. In the rest he found the defects to be: Too long, 33; too short, 451; too wide, 111; too narrow, 266.

WATER SUPPLY AND SEWAGE DISPOSAL.

The questions of water supply and sewage disposal at Fort Leavenworth, Kans., and Fort Sheridan, Ill., which were fully discussed in my last report, are now in process of being solved by the carrying out of the recommendations of the board of officers organized for the consideration of these questions, composed of Lieut. Col. J. R. Kean, Medical Corps; Maj. F. F. Russell, Medical Corps, and Capt. (now Maj.) Bertram T. Clayton, Quartermaster's Department. This board, having made a study of the present status of ozone purification of water, recommended on February 11, 1911, the installation of an electric ozone plant at Fort Niagara under guarantee as to the satisfactory performance of its work for a period of one year. The hypochlorite method was not favorably considered at this post because it had failed to give satisfaction in practice at the city of Niagara, and

rapid filtration because it works on the basis of percentage removal of bacteria, and is so not reliable for such heavily polluted water as that of the Niagara River.

The board was also directed to consider a method of sterilization of water by the use of pure chlorine gas, which had been devised and brought to the attention of the War Department by Maj. Carl R. Darnall, Medical Corps. In a report dated June 1, 1911, the board stated:

> The use of chlorine gas as a sterilizing agent is not new, but heretofore it has been used for water sterilization in a watery solution, and the chlorine was the agent depended upon to produce sterilization. In the hypochlorite of lime method of water purification, which has in the last few years come greatly into vogue, especially for the water supplies of the smaller towns, it has been recognized that the sterilizing agent was not the chlorine but the nascent oxygen set free by the union of the chlorine of the hypochlorite with the hydrogen of the water. This is the principle utilized in the Darnall apparatus, but the chlorine instead of being obtained from a combination of salt which is of an uncertain strength and contains impurities, is purchased in the state of a purified gas under high pressure in steel cylinders. The use of the agent in this form offers very great advantages in the way of convenience and certainty of operation and accuracy of dosage which are not obtainable with the hypochlorite apparatus.
>
> A most important feature of the apparatus is an automatic dosing arrangement which takes the place of the dosing tanks of the hypochlorite apparatus and does away with the necessity of the constant personal supervision of a trained attendant.
>
> It is the conclusion of the board that this apparatus offers the following advantages over other methods of water purification now in use:
>
> 1. *Efficiency.*—It is believed that the apparatus is as efficient as purification by ozone or by hypochlorite, and is more reliable in operations than either.
>
> 2. *Cost of installation.*—The apparatus is exceedingly simple and could be installed in connection with any water supply where the water is pumped into a tank or storage reservoir at very small cost.
>
> 3. *Cost of operation.*—The cost of chlorine in steel cylinders is from 12½ to 15 cents a pound, depending upon the quantity purchased. As the amount used is very small, less than 1 part per 1,000,000, the cost would be from 50 to 60 cents per 1,000,000 gallons of water purified. The cost of attendance would be very slight, as the apparatus is automatic, and only requires the attachment of a new cylinder at infrequent intervals when the supply of chlorine becomes exhausted. An electric attachment can give notice of this by the ringing of a gong or it can easily be foreseen by periodical inspections of the pressure gauges.
>
> In view of the advantages which this apparatus is believed by the board to possess over those now on the market, it is recommended that such an apparatus be installed by the Quartermaster's Department at some post where the water is polluted and where no satisfactory system of purification has been installed.

The purity of the water supply at Fort Crook is jeopardized by habitations and privy pits along the edge of the reservation, and the purchase of a strip of land will be necessary to remove this danger. Negotiations with the owners have been entered into, but no provision made in the appropriations for this important purpose. An abundant water supply for the Presidio of San Francisco has been developed from Lobos Creek, a short but bold stream on the edge of the reservation. A recent purchase of a strip of land on its south bank has made it reasonably secure from contamination. As a further security the water is subjected to rapid filtration.

The water supply at Fort Porter, N. Y., Fort Ontario, N. Y., Fort Omaha, Nebr., and Fort Lincoln, N. Dak., is dependent upon the municipal systems of neighboring cities which draw their supplies from contaminated sources. In these cases it is necessary to resort to some system of purification until the urban supply is improved. The adoption of chemical purification by the use of nascent oxygen, either by the hypochlorite process or the Darnall chlorine process, appears to be well suited to these cases.

Deficiency in the water supply at Fort Lawton, Wash., has been reported during the past summer (1911) owing to the fact that it is from the municipal system of Seattle and has been depleted by persons who have tapped the post supply pipe before it reaches the reservation. The city authorities have been appealed to to remedy these conditions.

Much difficulty has been found at this post in disposing of the garbage and especially of the manure of the large number of horses and mules collected at this post from time to time awaiting shipment to the Philippines. The surgeon called attention to the swarms of flies bred by this manure and recommended the construction of a crematory, but this has been opposed by the post commander for the reason that crematories were, in his opinion, expensive to build and to maintain, and their successful operation required very careful attention and skilled labor, which is not always possible to secure without hiring civilian operators. He recommended using the manure as a top dressing for the grounds and in the post garden.

At Schofield Barracks, where the troops are still in cantonments, the surgeon reports the disposition of waste waters by means of cesspools as unsatisfactory and unsanitary. He recommended the construction of the biological system of sewage disposal. This was, however, disapproved by the post commander because the cost would be excessive for temporary use and the location of the permanent post is at present undetermined.

The surgeon at Fort De Russy has called attention to the abundance of mosquitoes at that post, and to the fact that the stegomyia calopus, the mosquito responsible for the transmission of yellow fever, abounds there. As direct communication by steamer is frequent between the Hawaiian Islands and the west coast of Mexico, he believes there is serious danger of the introduction of yellow fever, and points out that on November 4, 1910, a case of yellow fever was discovered on the Japanese liner *Hongkong Maru*, proceeding from Manzanillo, Mexico.

Water supply, garrisoned posts, United States.

Post.	Source.	Purification.	Quality.
Adams, R. I.	Newport city supply surface; impounded.	Mechanical filtration	Excellent.
Alcatraz Island, Cal.	Steamer from San Francisco (Lobus Creek).	Mechanical filtration and hypochlorite treatment.	Good.
Andrews, Mass.	Metropolitan waterworks, Boston surface; impounded.		Do.
Apache, Ariz.	East Fork, White River.	Filters through coarse gravel and porous limestone into large well about 300 yards from river.	Excellent.
Army and Navy General Hospital, Hot Springs, Ark.	Hot Springs	Cooled in reservoirs	Good.
Assinniboine, Mont.	Driven wells	None	Do.
Baker, Cal.	Lobos Creek	Mechanical filtration and hypochlorite treatment.	Do.
Banks, Mass.	Winthrop City system (Nashua River).		Do.
Barrancas, Fla.	2 drilled wells	None	Some chlorine; good.
Bayard, N. Mex.	Springs	do	Good.
Benj. Harrison, Ind.	5 artesian wells	do	Excellent.
Bliss, Tex.	"Mesa water;" 2 artesian wells.	do	Do.
Boise Barracks, Idaho.	Springs impounded	do	Good.

Water supply, garrisoned posts, United States—Continued.

Post.	Source.	Purification.	Quality.
Brady, Mich	St. Marys River (city of Sault Ste. Marie system).	None	Excellent.
Carroll, Md	Artesian well	do	Iron high; good.
Casey, Wash	Wells	do	Good.
Caswell, N. C	Drinking water; cisterns; other use (surface wells).	do	Do.
Chickamauga Park, Ga	Drilled wells	Hypochlorite treatment	Subject to contamination.
Clark, Tex	Springs	None	Excellent.
Columbia, Wash	do	do	Do.
Columbus Barracks, Ohio.	Springs (city of Columbus supply).	Filtered and treated by company (underground filtering galleries).	Good.
Constitution, N. H	City of Portsmouth, N. H., supply.		Excellent.
Crook, Nebr	8 wells	None; Aug. 15, 1910, recommend Government purchase adjacent land—avoid contamination).	Subject to contamination.
Dade, Fla	Rain water for drinking and cooking; 6 shallow wells for other purposes.	None	Good.
De Soto, Fla	Rain water for drinking and cooking; artesian well other purposes.	do	Do.
D. A. Russell, Wyo	Crow Creek (Cheyenne water system); perpetual rights September, 1910.	Percolation through sand and gravel.	Do.
Davis, Alaska	Nome River	None in winter; in summer distilled by means M. J. Davidson evaporating and condensing plant.	Do.
Des Moines, Iowa	Raccoon River; city of Des Moines supply.		Do.
Douglas, Utah	Red Butte Creek	Settling tank	Do.
Duchesne, Utah	Uintah River	None	Subject to contamination.
Du Pont, Del	Artesian well	Occasionally distilled for drinking.	Good.
Ethan Allen, Vt	6 artesian wells	None	Do.
Flagler, Wash	Olympic Mountains (Port Townsend Water Co.).		Excellent.
Fremont, S. C	Artesian well for drinking; cisterns for other uses.		Do.
Gibbon, Alaska	Well—50 feet from Yukon River.	do	Good.
Governors Island, N. Y	From Brooklyn, N. Y	Sedimentation	Excellent.
Greble, R. I	Saunderstown Springs	None	Good.
Hamilton, N. Y	Brooklyn, N. Y., supply	Sedimentation	Excellent.
Hancock, N. J	2 artesian wells	Sedimentation and filtration.	Good.
Howard, Md	Artesian well	Filtered	Do.
Huachuca, Ariz	Springs	None	Very good.
Hunt, Va	Artesian well		Good.
Jackson Barracks, La	New Orleans water system		Excellent.
Jefferson Barracks, Mo	Mississippi and Missouri Rivers (St. Louis Water Co.).	Treated with coagulants of sulphate of lime.	Do.
Key West Barracks, Fla	Drinking water from 24 cisterns and from a distilling apparatus; water for distilling obtained from several shallow and 1 deep well, mixed in the same tank.		Good.
Lawton, Wash	Seattle city supply (inadequate); report of chemical analysis of water from springs on reservation, "potable."		Excellent.
Leavenworth, Kans	Missouri River (Leavenworth Water Co.); paid for according to purity.		Good.
Lincoln, N. Dak	Missouri River (Bismarck Water Supply Co.).	Boiled	Subject to contamination.
Liscum, Alaska	Small mountain streams	None	Good.
Logan, Colo	3 artesian wells	do	Excellent.
Logan H. Roots, Ark	Deep wells in the city of Argenta.	do	Good.
Madison Barracks, N. Y	Henderson Bay, Lake Ontario.	Without filtration	Do.
Mansfield, R. I	From town of Westerly, R. I.		Excellent.
Mason, Cal	Lobos Creek	Mechanical filtration and hypochlorite treatment.	Good.
McDowell, Cal	Springs		Do.

Water supply, garrisoned posts, United States—Continued.

Post.	Source.	Purification.	Quality.
Depot recruits and casuals, Angel Island, Cal.	Lobos Creek	Mechanical filtration and hypochlorite treatment.	Good.
McHenry, Md	Baltimore city waterworks	Filtration at reservoirs; boiling at post.	Do.
McIntosh, Tex	Well for household use; Rio Grande River for other use (during dry season well supply diminishes one-half).		Strongly alkaline (good); hard.
Mackenzie, Wyo	Mountain stream (Big Horn Mountains).		Excellent.
McKinley, Me	Artesian wells (limited); 3 new wells being sunk.		Much iron; good.
McPherson, Ga	6 wells		Excellent.
McRee, Fla	Drinking water from Fort Barrancas (2 drilled wells).		Good.
Meade, S. Dak	Deadmans Creek (basin, capacity 25,000,000 gallons, soon to be begun).		Excellent.
Michie, N. Y	Dependent upon rainfall and boat from New London, Conn.		Good.
Miley, Cal	Spring Valley Water Co	Filtered	Excellent.
Missoula, Mont	Bitter Root River (Nov. 17, 1910, new system being installed, taking water three-fourths mile above sewer outlet; old system 75 yards above).		Good.
Monroe, Va	Newport News Light & Water Co. (sea water for flushing, etc).		Do.
Morgan, Ala	Rainwater for drinking; other purposes, well.		Do.
Mott, N. J	Artesian wells		Excellent.
Moultrie, S. C	Cisterns, drinking water; artesian water containing many salts, other purposes.		Good.
Myer, Va	Potomac River	Filtered	Very good.
Niagara, N. Y	Niagara River	Distilled for drinking	Contaminated.
Oglethorpe (new post), Ga.	Deep wells	Boiled	Good.
Ontario, N. Y	Oswego River, Oswego Waterworks Co. (installing new plant to draw from Lake Ontario).	do	Do.
Pickens, Fla	Wells		Fair.
Plattsburg Barracks, N. Y.	Foothills of Adirondack Mountains.	Mechanical sand filtration at post.	Good.
Porter, N. Y	Niagara River, Buffalo city waterworks.		Bad.
Preble, Me	Sebago Lake (Portland city supply).		Excellent.
Presidio of Monterey, Cal.	Carmel River (Monterey waterworks).		Good.
Presidio of San Francisco, Cal.	Lobos Creek	Mechanical filtration and hypochlorite treatment.	Do.
Reno, Okla	6 wells (drinking water from Caddo Springs on the Cheyenne and Arapaho Indian Reservations).		Good; hard.
Revere, Mass	Hingham Water Co., Mass		Good.
Riley, Kans	8 wells		Do.
Ringgold, Tex	Rio Grande River (condensed water for drinking).		Muddy; good.
Robinson, Nebr	Springs (supply to be increased).		Excellent.
Rock Island Arsenal, Ill	Mississippi River and artesian well.		Good.
Rodman, Mass	New Bedford city system		Excellent.
Rosecrans, Cal	City of San Diego supply	Filtered by company	Good.
Sam Houston, Tex	Artesian wells		Good, but highly impregnated with lime.
Schuyler, N. Y	New York City waterworks		Good.
Screven, Ga	3 artesian wells		Excellent.
Sheridan, Ill	Lake Michigan		Subject to contamination.
Sill, Okla	4 wells and Ambrosia Springs		Good.
Slocum, N. Y	Springs and streams; New Rochelle Water Co.	Boiled when necessary	Do.
Smallwood, Md	Well		Do.
Snelling, Minn	Artesian well		Do.

Water supply, garrisoned posts, United States—Continued.

Post.	Source.	Purification.	Quality.
Stevens, Oreg.	Springs.		Subject to contamination.
St. Philip, Fla.	Rainwater for drinking; Mississippi water for other purposes.		Good; suspicious.
St. Michael, Alaska.	From fresh-water ponds in the tundra.	Boiled as a precaution.	Good; considerable vegetable matter.
Strong, Mass.	Boston water supply.		Excellent.
Sumter, S. C.	Rainwater.		Good.
Terry, N. Y.	6 driven wells.		Do.
Thomas, Ky.	Ohio River.	Boiled.	Subject to contamination.
Totten, N. Y.	Flushing Waterworks Co.		Good.
Trumbull, Conn.	New London Waterworks.		Do.
Vancouver Barracks, Wash.	3 wells.		Do.
Wadsworth, N. Y.	Crystal Water Co. and 5 wells on post.		Do.
Walla Walla, Wash.	City of Walla Walla (independent supply recommended July 3, 1910).		Do.
Ward, Wash.	Springs.		Do.
Warren, Mass.	Boston supply.		Excellent.
Washakie, Wyo.	South Fork of Little Wind River.		Good.
Washington Barracks, D. C.	Potomac River.	Sand filtration.	Excellent.
Watervliet Arsenal.	Hudson River; new well.		Subject to contamination.
Wayne, Mich.	Detroit River at outlet from Lake St. Clair.		Fair.
West Point, N. Y.	Round Pond.	Filtered.	Good.
Wetherill, R. I.	Jamestown Light & Water Co.		Do.
Whipple Barracks, Ariz.	Springs at Del Rio.		Do.
Wm. H. Seward, Alaska.	From mountain stream 3 miles from post across Chilcat River.		Excellent.
Williams, Me.	City of Portland waterworks; Sebago Lake.		Do.
Wingate, N. M.	Bear Spring.		Do.
Wood, N. Y.	Jersey City waterworks.	Treated with chloride of lime by company.	Do.
Worden, Wash.	Wells (Spring Valley Water Co. of Port Townsend, Wash.).		Good.
Wright, H. G., N. Y.	Fishers Island Water Co. (Oct. 25, 1910, recommended that wells be sunk in northeast corner of parade ground).		Good; inadequate.
Wright, Wash.	From city of Spokane, Wash.		Do.
Yellowstone, Wash.	Glen Creek, a tributary of Gardiner River.		In fall taste is bad from algæ; otherwise good.

MANEUVER CAMPS, 1910.

During the summer of 1910 camps for the instruction of the Regular and Militia troops were established at the following places: Pine Camp, N. Y.; Fort Benjamin Harrison, Ind.; Fort Riley, Kans.; American Lake, Wash.; Gettysburg, Pa.; Chickamauga Park, Ga.; Leon Springs, Tex.; Atascadero, Cal.; Camp Bruce E. McCoy, Sparta, Wis.; and Camp Otis, Wyo. The following were the chief surgeons of these camps, in the order named: Col. John Van R. Hoff, Col. L. Mervin Maus, Lieut. Col. William Stephenson, Col. Rudolph G. Ebert, Lieut. Col. Frank R. Keefer, Col. Blair D. Taylor, Lieut. Col. Allen M. Smith, Lieut. Col. Henry S. T. Harris, Lieut. Col. Wm. B. Banister, and Col. Aaron A. Appel. The health of the commands of these camps was remarkably good.

Field Service Regulations, paragraph 292, subhead 4, states:

It is the duty of commanders to remedy sanitary defects reported to them by sanitary inspectors. To facilitate the attainment of proper results in sanitary emergency, a sanitary inspector may be authorized by the commander of the unit to which he is assigned to direct, in the name of the latter, and within such limitation as the commander may prescribe, the prompt abolition of conditions prejudicial to the health of troops.

In several of the camps the authority mentioned above was delegated to the chief surgeon and his assistants to a certain extent, but more completely so at Pine Camp than elsewhere. The following is a quotation from General Order No. 3, Pine Camp:

The chief surgeon will supervise the hygiene of the entire camp. Under his direction daily sanitary inspections are made; if faults are found the attention of regimental commanders will be called to them, and the necessary steps will be taken by the latter for their correction. Any failure to remedy insanitary conditions will be reported to the commanding general.

It is worthy of note that this camp had the lowest sick report of any during the summer, and no doubt the chief surgeon is correct in his statement that the health record of this camp was the best on record in this country.

The following shows the ratios for admission per 1,000 per year for the Regular troops at the various camps: Chickamauga Park, 1,245.00; Gettysburg, Pa., 902.91; Atascadero, 846.99; Camp Bruce E. McCoy, 794.95; Camp Otis, Wyo., 706.74; American Lake, 705.15; Leon Springs, Tex., 612.07; Fort Benjamin Harrison, Ind., 602.68; Fort Riley, Kans., 597.68; and Pine Camp, N. Y., 525.28.

The admission rate for the militia troops was correspondingly low. The following is from the report of Col. John Van R. Hoff:

A study of the statistics of the regular units simply confirms the well-known fact that among troops in campaign there is a slowly increasing nonefficiency from sickness until the physically unfit are eliminated, even though the local sanitary conditions are perfect. A body of men can safely remain in almost any kind of a camp for a week or 10 days, but thereafter the danger from insanitary conditions increases in geometrical proportion. I mention this axiom in castrametation, as medical officers of State troops, ignorant of it, are being misled by the good records of their short camps, which records could not be maintained, under the conditions, for any length of time.

The unprecedented health result at Pine Camp in 1910, "unprecedented," for, so far as I know, no camp of instruction in the United States has ever before reported every case excused on account of sickness (whether treated in hospital or quarters) and shown such small constant nonefficiency, is due to several causes. First, an ideal camp ground; second, good water; third, delightful weather; fourth, good sanitary conditions, administered by experts, loyally assisted by the Quartermaster's Department and firmly upheld by the camp commander.

Twelve cases of typhoid fever occurred among the Regular troops. Of this number, seven occurred at Camp Chickamauga, Ga. The chief surgeon stated that in five of these the infection was probably contracted elsewhere before the arrival in camp. The water in this camp, while sufficient in quantity, contained numerous colon bacilli and had to be boiled. The wells in the park were all marked "Not fit to drink," except one which was pure. In two cases among the militia the infection was contracted prior to leaving their homes. Three cases occurred in one Signal Corps company at Fort Benjamin Harrison. As this company had been at Pine Camp before going to Fort Benjamin Harrison, and as there was no other case in either camp, the infection was most probably either contracted elsewhere or there was perhaps a local infection in the company. A careful search was later made in this company for a carrier, but none was found. One

case occurred at American Lake and one at Camp Otis. In both of these cases the infection was probably contracted elsewhere. At American Lake two cases occurred among the militia. The infection in each instance was contracted before they left home.

Troop A of the Maryland National Guard was present at the Gettysburg Camp from July 1 to July 9. After the return of this organization eleven cases of typhoid fever occurred. The following shows the dates of occurrence of the cases: July 11, 1; July 19, 2; July 20, 1; July 24, 3; July 29, 1; August 8, 1; August 25, 1; September 9, 1.

This epidemic was carefully investigated by Maj. Alexius McGlannon, Maryland National Guard, chief surgeon, who reached the following conclusions:

I. The first case was a carrier with possibly the fourth case as a second carrier.

II. The milk supply was infected.

Mention of the epidemic which occurred in Company A, First Battalion Engineers, Washington Barracks, after leaving Gettysburg, will be found on page 46.

Paragraph 292, Field Service Regulations, 1910, directs that before troops are sent to camps of mobilization they should be carefully examined to detect the presence of contagious diseases, especially typhoid fever. This examination was made by the majority of the States before the militia organizations departed for their respective camps. In several instances incipient cases of tuberculosis and suspected typhoid fever were detected and were ordered to remain at their homes. In some States the authorities, however, neglected to order this examination. It is believed that this order should be rigidly observed, for in this way undoubtedly many incipient cases of contagious diseases may be detected and left at home. These, if allowed to accompany their comrades to the camp, as they no doubt would do if allowed to follow their own inclination, might infect others, and would either have to be treated in the camp or returned to their homes.

Several of the camps had a piped water supply. Some difficulty was experienced in properly disposing of the bath water in the camps having a piped supply. Maj. Frederick P. Reynolds, Medical Corps, sanitary inspector, Pine Camp, says:

> The problem which was less satisfactorily solved than any other was the disposal of bath water. This accumulated in great quantities despite the very favorable soil conditions. A pellicle soon formed on the surfaces of drains and pits and rendered them impermeable. The best results were obtained in conducting the water as far as it would flow in narrow and deep ditches, and scraping and raking the sides of the ditches frequently. Where ditches could not be used pits were dug. These were used alternately, the sides and bottoms being removed daily.
>
> These accumulations of bath water, while undesirable, were inoffensive, did not attract flies, and being protected from traffic, constituted no menace to health. The care of bath houses was more often overlooked than any other matter of sanitary police.

None of the camps had a sewage system. The methods of disposing of the human excreta were as follows:

1. Incinerators: (*a*) McCall, (*b*) Harris, (*c*) Conley, (*d*) United States.
2. Reed trough and excavator wagon.
3. Latrines with Havard box, burned out with crude oil.

The incinerators have not been found to be entirely satisfactory. In practically all of them there are mechanical imperfections. After the first or second year they begin to disintegrate, and many parts

have to be replaced. In addition, skilled labor is required to install and fire them properly.

The excavator wagon for the Reed trough system is very heavy, and it is difficult to get around with it on the ordinary camp site. The valves also frequently break down at the most inopportune time.

The use of the latrine with the Havard box, burned out with crude oil, is rapidly becoming more popular. Lieut. Col. Keefer says:

Extensive observation of incineration of excreta, when considered together with questions of cost, bad service, and risks of fly transmission of disease, confirm the opinion, expressed in my report as chief surgeon of the camp of instruction at Atascadero, Cal., in 1908, as follows: I am "greatly pleased with the use of crude oil in latrine troughs, and believe that no better system, all things considered, has yet been devised for the purpose."

Col. Ebert says:

The principles involved in the latrine box are such that they can be constructed by any company mechanic from material almost universally obtainable—a few boards, nails, and, if need be, leather hinges for the lids. No company commander would attempt to construct a McCall or Conley incinerator for a temporary camp out of such material as he could pick up, and should he do so he lays himself liable to prosecution under the patent laws of the United States. A Reed trough, or substitute therefor, is easily enough made if material is at hand, but odorless excavators are in a different category, and even when had the problem of safe final disposal of excreta still must be solved.

Without entering into the length of time it takes to install the various patented apparatus, or the weight required to be transported, or the far greater cost, the fact still remains that the latrine box and pit is something that can at any time be made by even unskilled labor and, therefore, should be demonstrated to all in a camp of instruction.

In several of the camps kitchen crematories were used. Some camps used them to dispose of all the kitchen waste, both liquid and solid, and others for only the solid. Some built one for each company, and others one for each regiment. The following is a description of the one used at Pine Camp:

Kitchen crematories.—These consisted of a pit 5 feet long, 2½ feet wide, and 4 feet deep, filled with rocks. The rocks were heaped in the center so that the pile was 6 inches higher than the surrounding ground. Instructions directed that before use a good fire be made on the rocks, then garbage, including tins, was to be thrown on at one end and the unburned residue removed at the other. When the rocks had become thoroughly heated liquid garbage was to be poured on gradually until all had been consumed.

These crematories were completely successful, disposing of all kitchen wastes, both solid and liquid. No garbage wagon or other means of disposal were provided. Although the crematories were new and untried by nearly all who used them, their management was soon learned. No other feature of camp sanitation gave so much satisfaction.

It is believed that this is the most satisfactory system for the disposal of kitchen waste yet devised.

When the company incinerators were not used, the solid garbage and the manure as well, were satisfactorily disposed of in several camps in the regimental incinerators. The following is a description by Maj. Percy M. Ashburn of the one used at the camp at Atascadero:

Solid garbage was disposed of by incineration, though in a few companies it was given to farmers who hauled it away for pigs. The incineration was partly in kitchen fires, especially in the Artillery, and partly in regimental incinerators. Of these latter, three types were used, of which only one was a pronounced success. That was so much of a success, however, as to merit much wider use is garrisons as well as in camp. It consisted essentially of a cylinder or chimney built above ground and having air inlets at the bottom. Increased height and increased height of inlets resulted in increased draft and consuming power. Grate bars also promoted both. The cylinders were

made of corrugated iron (small ones 4 by 2½ feet in diameter), of mud, and of rocks and mud. One 6 feet high, 4 feet in inside diameter, and having four bottom inlets each 14 inches square, with grate bars just above them, will care for the solid garbage and manure of a regiment of Infantry without the use of an appreciable amount of fuel other than the manure, straw, grass, and paper wastes of the camp. In one such incinerator (Second California) a cow and a horse were incinerated on different days in addition to the camp garbage. Extra fuel was, of course, used on those days. One such will probably incinerate the manure of from 100 to 150 horses, depending upon the amount of straw and the amount of earth mixed with the manure and the care given the incinerator.

Courses of instruction were given to the medical officers and corps men of the regular establishment, and the militia at the various camps. There was no uniform course outlined, but this was in each case outlined by the chief surgeon of the camp. The following remarks of Maj. Percy M. Ashburn are considered worthy of note:

I do think that maneuver camps are of great benefit to men of the Hospital Corps, as they learn the ways of camp life, the practice of camp sanitation, the improvisation of means for accomplishing a vast number of things, the best ways of caring for themselves, and a thousand small things that distinguish the veteran from the novice in camp. It is probable that the more camps they attend the better soldiers and the more valuable Hospital Corps men they will become. It is also probable that work arising in the solution of medical and sanitary problems developing from and after maneuver problems solved by the line would be profitable, but my personal opinion, in which I may be alone, is that more benefit would be derived from such a use of the Medical Department on maneuvers as is outlined below:

First. Take officers and men to maneuver camps to learn the ways of camp life.

Second. Let the men there be occupied mainly in sanitary work, caring for the sick, instructions and drills in camp, etc., or even practice marches.

Third. If medical units (field hospitals and ambulance companies) are sent out to participate in maneuvers, let it be in a medical problem taken up at the proper time and at proper places and distances, not during the earliest stages of a battle and within short rifle range of the enemy.

Fourth. Have them inspected and criticized or commended. Do not let them think that they are of so little importance as to be forgotten.

Fifth. Have medical officers assigned as chief surgeons, commanders of field hospitals, ambulance companies, etc., for maneuvers. let them go out as part of the staff, learn the condition that arises during or after the development of the battle and later submit written solutions of their respective parts of the sanitary or medical problem that has resulted.

Let them later even take out the units, if it is desired, and establish and use them in a proper way, at proper times, and in proper places, but not in improper and misleading times, ways, or places.

Sixth. Make more use of tactical rides and less of gunshot wounds of the femur dressed by the application of a first-aid packet to the outside of the trouser leg.

It is very important that the medical officers of the regular establishment and of the militia should be given thorough instruction in map problems and maneuvers at these camps as well as in sanitary measures. Col. Maus says:

From recent observations I am of the opinion that too little attention has been paid in camps of instruction to the employment of the Medical Department in case of mimic battles, engagements, and field maneuver in general. With the exception of occasions the medical officers, ambulances, and bearers were not called out during the various problems at our recent maneuver at Fort Benjamin Harrison, in which engagements quite frequently occurred. The importance of the establishment of first-aid base, field and first-aid or dressing stations during engagements is too well known to evoke discussion, and yet rarely were any of the medical officers assembled at Fort Benjamin Harrison required to participate in these important maneuvers. While the duties of the medical officers performed were very important there, such as care of regimental sick, camp sanitation, and field hospital work, the principal object of their visit was entirely defeated. Especially was this the case with the National Guard medical officers, who felt that they had learned nothing practically of duties connected with troops during an engagement. This was the case also with officers of the regular corps, who were rarely called away from the camp grounds, not even during the bivouac one night, in which the entire command participated.

COAST DEFENSE EXERCISES.

The joint Army and militia coast defense exercises were conducted in the vicinity of several Coast Artillery Corps posts during the summer.

These camps were of moderate size and their general sanitary arrangements did not differ materially from the maneuver camps. The following remarks of Capt. E. W. Miller, Medical Corps, surgeon at the camp at Fort Williams, Me., are of special interest.

I would lay especial stress on the care of the field mess furniture, imperfect cleansing of which is so common and so difficult to regulate because of their constant use, multiplicity of caretakers, and the variety of storing places between times—on the bunks, under the bunks, in the haversacks, hanging to tent poles, etc.—each and every man having a hand in this work three times per day. A practice which some of the companies readily took up and which proved most satisfactory was that of having the noncommissioned officer in charge of quarters have supervision of kitchen and surroundings, by taking his meals early, remaining on watch in mess tent during meal times, to limit as much as possible the throwing or spilling of foodstuffs on tables or ground, then taking his place at the hot-water cans and requiring every man to submit for inspection, after washing, his entire mess outfit. He should also inspect and be responsible for thorough scrubbing of mess and kitchen tables and policing of mess floors after each meal.

In many cases nothing but very small cans were provided for washing mess outfits of the men, and these proved inadequate. Large boilers should be provided, at least two to each company, one to contain hot water strongly soaped and the other clean hot water for thorough rinsing of the outfits. They should be located near the garbage cans and be heated over a separate fire and not the kitchen range. A fire pit can readily be constructed for this purpose and the boilers allowed to remain over them with a slow fire during use, thus preventing the contents from becoming too cool to cut the grease on utensils and furthering cleanliness by incinerating scraps and crumbs from mess kits and splashings during washing, all of which would otherwise litter the surrounding ground. A tent fly over this fire pit and garbage stand would preclude the rains discouraging their proper use.

MANEUVER CAMPS ON THE MEXICAN FRONTIER, 1911.

Early in March, 1911, orders were issued to mobilize a division of troops near San Antonio, Tex., a separate brigade at Galveston, and one near San Diego, Cal.

Col. Henry P. Birmingham, chief surgeon, Maneuver Division, San Antonio, Tex., reports as follows:

The troops comprising this division began to arrive at this camp early in March, the first regiment reaching here on March 10. It might be well to say at this time that while en route here an outline of the sanitary orders intended for the camp was drawn up by Maj. Straub, the sanitary inspector, and myself. The sanitary plan of this camp as it developed was carried out under three general heads or divisions, namely: (1) Disposal of excreta; (2) disposal of wastes, liquid, and solid; (3) disposal of manure and picket line refuse, and the same agent, fire, was used in disposing of them all. The matter of personal hygiene, aside from a general supervision, was left largely to the company commander, where it properly belongs. The disposal of excreta in camps in recent years, more especially since the Spanish War, has passed through three stages, the latrine pit, the Reed trough with excavator attachment, and the so-called incinerator. The old latrine pit, where the contents were not treated in any way, except perhaps by the desultory application of a little earth or lime, has been justly condemned and cast aside. The Reed trough, with its leaky excavator, long haul, attendant stream or soil pollution, and enforced abandonment of it in freezing weather, has failed to properly meet the requirements, and the incinerator, aside from the matter of expense and annoyance from the disagreeable odor so often complained of, is on account of its weight and the delay attending its installation, impossible as a part of a moving command either actual or prospective.

The question of excreta disposal was met at this camp by using the narrow latrine pit, 18 to 24 inches in width, covered by a tightly fitting light-proof box with urinal

attachment, the contents of which were sterilized daily by fire. I use the word "sterilized" advisedly, for these latrines, some of them after three months' constant use, were as free from putrefactive odor as the day they were put in operation, proving thereby that sterilization must have been complete. There is nothing new in this method, for it has been used before. The only change made here was the restricted width of the pit in order to get the full effect of the fire, and the use, perhaps, of additional crude oil in the firing. A gallon with a layer of hay or straw was the minimum quantity of oil used, which amount was increased proportionately in wet weather. It has been found that by the use of additional oil that hay or straw can be dispensed with, thereby increasing the time that the pit may be used. The box seat is removed during the burning of the pit, and while this is in process the interior of the seat is given a thorough coating with a freshly prepared mixture of quicklime.

(Besides the greater simplicity, mobility, and quickness of installation of the sink box as compared with incinerators, the Quartermaster's Department estimated that the cost of the sink-box system was $900 a month for the whole camp, whereas incinerators of an improved type would cost for material and labor $30,000 a month.)

The camp wastes, both liquid and solid, were disposed of in what has come to be known as the kitchen crematory, which, as used in this camp, consists essentially of a shallow pit a foot deep, 4½ feet long, and 2½ feet wide, with surrounding walls of clay or rock a foot high, and floored with a layer of cobblestone or broken rock a foot deep. This simple contrivance, when well made, effectually disposes of all the liquid and solid wastes of the camp except the bath and wash water.

As is well known, horse manure is a favorite breeding place for flies, and its proper disposal therefore becomes a matter of very considerable sanitary importance. Upon the establishment of the camp, a manure dump was selected about a mile from the confines of the camp and a special sanitary squad, consisting of one private, Hospital Corps, and four civilians, attended to the burning of the manure and picket-line refuse. A mounted detachment from the provost guard, under a noncommissioned officer, supervised the unloading and saw that it was dumped where it could be properly handled. This arrangement was satisfactory and no complaints were made concerning it.

As it is well known that flies breed not only in manure but in soil soaked with excreta or other organic matter, it was thought at an early period that destruction of the ova and larvæ of the fly on the picket line could be brought about by thoroughly burning it over, using part of the dry refuse and manure freely sprinkled with crude petroleum. This was tried experimentally at first, and proving practical and effective an order was issued from division headquarters that all picket lines in camp should be so treated once a week, 10 gallons of oil being used at a burning.

From what has preceded it may be seen that the three great centers in camp which afford breeding places for flies, viz, the latrine, the picket line, and the garbage wastes, have been eliminated as such. It is therefore not surprising that there should be comparatively few flies found and that instead of increasing as the season advances they are rapidly diminishing, a fact attested by all now here.

Paragraph 7 of the sanitary orders authorized the formation of sanitary squads composed of medical officers, noncommissioned officers and privates of the Hospital Corps, and civilian employees. It was the intention to organize regimental sanitary squads, but until late in the encampment the regimental detachment was reduced to three or four men, owing to lack of sufficient number of sanitary soldiers, and no steps were taken in this direction.

The general sanitary squad organized in the maneuver division consisted of a medical officer, the sanitary police officer, 2 noncommissioned officers and 5 privates of the Hospital Corps, and from 4 to 10 civilian laborers. Two 4-mule teams with two drivers were assigned to this squad. One noncommissioned officer, one private, and the civilian employees managed the manure and can dump and attended to the drains and the oiling. During the earlier weeks of the encampment the squad occasionally operated an odorless excavation to empty latrine pits that had become flooded for lack of proper ditching.

During the first week of the encampment this squad also delivered lime and oil to all incoming organizations so that there would be no delay in safeguarding the latrines. One noncommissioned officer and four privates of the Hospital Corps were specially instructed in the construction and operation of the kitchen incinerator. As soon as they became proficient they were sent to various organizations in camp to give demonstration to enlisted men of companies that were directly concerned in the operation of incinerators and much good was accomplished thereby.

The duties of the sanitary squad should be specifically and formally made a part of the field training of all sanitary soldiers. With the assistance of men well trained in such duties a practical plan of camp sanitation could be put into operation much more effectively, especially where new troops are concerned, and dangerous delays avoided.

The water supply of this camp was received from Fort Sam Houston, the water being piped throughout the camp.

The health of the troops of this division has been uniformly good from the inception of the camp in March last to the present time. The noneffective rate per thousand from all causes, by months, has been as follows: March, 13.7; April, 19.8; May, 23.4; and June, 24.2. The highest noneffective rate has been that from venereal diseases, 4.1 per thousand, and next in order that from measles and mumps, 3.1 per thousand. The measles and mumps, almost without exception, developed in newly arrived recruits, only a few cases appearing among the other troops. As a precautionary measure all recruits were segregated, at first in camp and afterwards in vacant barracks in the post, for a period of two weeks. During this time they were given the typhoid prophylactic, and if at the end of this period no disease developed they were sent to their organizations.

The immense advance in camp sanitation, and particularly the value of the typhoid prophylaxis can be estimated by comparing the typhoid incidence of this camp with that of the Second Division, Seventh Army Corps, which was organized at Jacksonville, Fla., about June 1, 1898, and remained there in camp until October, some of the regiments leaving in September. This division was not conspicuously unfortunate in its typhoid record for that time and is selected because of the close similarity of its conditions of service to those of the Maneuver Division. The two divisions were encamped in nearly the same latitude and for about the same length of time, and each had a good camp site and an artesian water supply of unimpeachable purity. While the period in camp of the Second Division, Seventh Army Corps, was later in the year, the number of men involved is larger for the Maneuver Division. The following table referring to the former is taken from the celebrated Report on Typhoid Fever in United States Military Camps in the Spanish War, by Reed, Vaughan, and Shakespeare, volume 1, page 609:

Table showing, for the regiments of the Second Division of the Seventh Army Corps assembled at Jacksonville, Fla., the mortality and morbidity from typhoid fever, 1898.

Regiments.	Mean strength.	Cases of typhoid fever.		Deaths from typhoid fever.	Deaths from all diseases.
		Certain.	Certain and probable.		
Second Illinois	1,095	253	341	18	22
First North Carolina	1,164	147	227	16	20
Second New Jersey	1,153	185	318	29	32
First Wisconsin	1,232	209	311	46	48
Fiftieth Iowa	1,097	164	253	33	33
Ninth Illinois	1,288	153	248	18	28
Second Virginia	1,220	105	152	17	20
Fourth Virginia	1,274	135	231	21	28
Forty-ninth Iowa	1,236	378	612	50	50
Total	10,759	1,729	2,693	248	281

Table showing for the organizations composing the Maneuver Division at San Antonio, Tex., the morbidity and mortality from typhoid fever, Mar. 10 to July 10, 1911.

Organizations.	Mean strength, June, 1911.	Cases of typhoid fever, certain and probable.	Deaths from typhoid fever.	Deaths from all diseases.
Eleventh Infantry	924			
Fifteenth Infantry	969			2
Eighteenth Infantry	1,022			
Thirteenth Infantry	929			
Twenty-second Infantry	1,033			
Tenth Infantry	1,016			1
Seventeenth Infantry	954			
Twenty-eighth Infantry	951			
Third Field Artillery	847			2
Fourth Field Artillery	741			1
Engineer Battalion	536			1
Signal Corps	197			
Ninth Cavalry	744			
Eleventh Cavalry	1,143			3
Sanitary troops	795	[1] 1		1
Total	12,801	1		11

[1] This case, a private of the Hospital Corps, had not completed his immunization, having taken only two doses. The case was very mild and would perhaps have been overlooked but for the rule that blood cultures were made in all cases of fever of over 48 hours' duration. The Widal reaction has no diagnostic value in immunized persons, as all respond to it. Forty-nine cases of typhoid fever with 19 deaths were reported as occurring in the city of San Antonio during this period.

NOTE.—In addition to the above a civilian teamster not immunized was admitted for typhoid fever in April.

The question of typhoid prophylaxis and the occurrence of this disease in the Maneuver Division as well as in the brigade camps is discussed under the head of typhoid fever, United States, page 44.

During the months of April, May, and June 73 militia medical officers visited the division, each remaining 14 days. So far as practicable the assignments of these officers were so arranged as to give each one week with the regiments, where the details of the camp sanitation and the conduct of the regimental infirmary could be observed, and one week with the field hospitals and ambulance companies, where their organization and administration could be noted.

SEPARATE BRIGADE CAMPS.

The sanitary conditions were excellent at the brigade camp. The admission and noneffective rates were very low. No case of typhoid fever occurred at the Galveston camp in spite of the prevalence in the city, and only one case occurred at the brigade camp at San Diego, Cal. It was found necessary at these camps to vary the sanitary arrangement somewhat owing to the character of the soil and other meteorological conditions. Maj. Jos. Ford, sanitary inspector at Galveston, says:

The only latrines at first available in the camp were pits. Because of the sandy soil the walls of these pits were shored up with lumber, and for that reason they could not be burned out. Lime was used as required and covered seats were provided, but the latrines proved unsatisfactory. The ground water under the Second Regiment and the corral was so high that pits could only be dug about 18 inches deep. Heavy storms inundated all latrine pits and there was grave danger lest the entire camp become infected. The situation was aggravated by the fact that the camp sites of the First and Third Regiments were so contracted that space for new pits was not available. As soon as possible these two regiments were provided with a water-carriage system.

There was built for each battalion one zinc-lined trough 42 feet long, 22 inches wide at the top, 18 inches wide at the bottom, and 18 inches deep. The zinc lining was made of 48-inch sheets soldered together and nailed to supports so shaped that they gave a parabolic outline on cross section of the trough. This trough sloped down from each end, so that it was 6 inches lower at the middle than at the ends. From this middle point there projected a zinc-lined chute 4 inches in diameter and 3 feet long. This was ordinarily closed by a plunger which was padlocked to a stout cross-piece. Each trough was provided with 18 seats and with 2 apertures each 30 inches long to be used as urinals. These seats and apertures were closed by hinged covers which fell automatically.

The seats were of the type ordinarily found in closets; the urinals were places so cut in the top of the trough that they came to its front edge. The cover of the trough in which the seats and urinal apertures were cut was divided into hinged sections so that it could be raised and the trough exposed through its entire length. These troughs were placed in the rear of the battalions over manholes with their chutes projecting downward through the manholes into the post sewer. The manholes, except where the chutes entered, were closed by a wooden cover. Water was piped to each trough, and let in through a faucet which could be operated only by a wrench. Twice daily the plunger was raised, the trough emptied and refilled. Each trough cost $20. All labor incident to their construction and installation, except the plumbing, was performed by enlisted men. The troughs were built and installed in three days. The system proved entirely satisfactory. It was inexpensive, adequate, easily operated, odorless, and fly proof.

Fly traps were in general use throughout the camp, being placed near latrines, crematories, and in the kitchens. These traps were made of wire mosquito netting, laths, and barrel hoops or other light material. They cost about 40 cents each and were paid for from the company funds. The bait was a solution of sugar and vinegar, placed in a saucer under the central cone. Each trap caught about 100 flies a minute and collectively they soon rid the camp of these pests.

The camps of the brigade near San Diego, Cal., used deep pit latrines covered with the Havard sink box. The latter was treated daily with crude oil, but was burned out only once a week. The urinals were made of funnels of tarred paper stuck into a hole in the sink box. Garbage was destroyed in improvised incinerators in the same way as at the camp at San Antonio.

ALASKA.

The mean strength of the troops serving in Alaska was about the same as last year, consisting of Infantry, Signal Corps, and Hospital Corps, in all 1,081 men, all white.

The noneffective, admission, and death rate, and average number of days lost were greater than for the preceding year. There were three deaths. Nine men were invalided home, and were discharged for disability, four on account of tuberculosis, two for venereal disease, and one each for gunshot wound, frost bite, and disease of the organs of locomotion.

The principal causes of admission for disease were venereal diseases, alcoholism, tonsillitis, and bronchitis. The infectious fevers were noticeably absent, no case being reported of typhoid fever, smallpox, measles, scarlet fever, or diphtheria.

Alaska still maintains its position as by far the healthiest region where the Army is stationed.

PORTO RICO.

There are in Porto Rico two military posts, San Juan at the capital, and Henry Barracks in the interior, both garrisoned by the Porto Rican Regiment. The mean enlisted strength for 1910 was 591. The enlisted strength of this regiment is recruited from native Porto Ricans, the officers being in part Americans and in part Porto Ricans.

TABLE NO. 34.—*Movement of sick in Porto Rico, year 1910.*

	Years.	From all causes.		Excluding injuries, venereal diseases vaccinia, and alcoholism.	
		Total.	In hospital.	Total.	In hospital.
Ratio per 1,000 of mean strength:					
Admissions to sick report	1910	952.62	895.09	656.51	.....
	1909	1,188.71	1,135.80	832.45	.....
Discharges on certificate of disability	1910	15.23	.....	5.08	.....
	1909	10.58	.....	5.29	.....
Deaths	1910	.....	.....	.....	.....
	1909	12.35	.....	7.05	.....
Total losses	1910	15.23	.....	5.08	.....
	1909	22.93	.....	12.34	.....
Noneffective	1910	31.98	29.88	17.66	16.16
	1909	43.03	41.55	23.80	23.00
Average number days lost:					
For each soldier	1910	11.43	10.72	6.36	5.82
	1909	15.71	15.17	8.69	8.39
For each case	1910	12.20	12.16	9.81	.....
	1909	13.21	13.35	10.43	.....

The admission, noneffective, death, and total loss rates were all smaller than for last year. The discharge rate was, however, higher.

The admission and discharge rates were higher than those for the American troops, but the death and noneffective rates were both lower.

Table No. 35 gives the rates for the prevailing diseases, from which it will be seen that there is a marked decrease in the rates for venereal diseases and malarial fevers. There is also a slight decrease in the rate for ankylostomiasis, and a slight increase in the rate for filariasis. Both of these diseases are very prevalent in Porto Rico. The surgeon, San Juan, reports that a considerable number of infections by the former were incurred by the men wading through soft mud in a practice march, by which means the larvæ of the parasite gained admission to the skin of the feet.

TABLE NO. 35.—*Diseases of Porto Rican troops—Admission rates per 1,000 of mean strength.*

	1910	1909	1908
Venereal diseases	162.44	250.44	242.91
Gonorrhea and results	74.45	126.98	143.62
Chancroid and results	55.84	89.95	60.28
Syphilis and results	32.15	33.51	39.01
Ankylostomiasis	76.14	8.82	14.18
Malaria	74.45	179.89	219.86
Furuncle	57.53	109.35	78.01
Filariasis	28.76	22.93	3.55
Influenza	23.69	82.89	83.33
Dysentery	22.00	14.11	15.96
Bronchitis, acute and chronic	20.30	29.98	19.50
Dyspepsia	16.92	49.38	62.06
Typhoid fever	5.08	5.29	5.32
Insanity	3.38	3.53	1.77
Measles	1.69	17.64	19.50
Rheumatism, acute, articular	1.69	8.82	5.32
Smallpox	1.69	3.53	7.09
Tuberculosis	1.69	3.53	1.77

The highest admission rate was in January and the lowest in September, the highest noneffective rate being in March and the lowest in May. There were no deaths.

RECRUITING.

Forty-nine and six-tenths per cent of the recruits examined by medical officers were accepted, as compared with 70 per cent for 1909; 71.2 per cent of the accepted candidates were between the ages of 21 and 25, inclusive, and only 5 candidates were under 21; 75.8 per cent were 66 inches or under in height, and only three reached the height of 5 feet 9 inches or over; 84.8 per cent of recruits were under the average height of the American recruits, viz, 67.56 inches; 62.1 per cent weighed less than 130 pounds, and only 3 weighed 150 pounds or over; 63.6 per cent had a chest measurement of 33 inches or under, and 16.6 per cent had chest measurements of 35 inches or over, as compared with 14 per cent for last year.

REJECTIONS.

TABLE NO. 36.—*Causes of rejections of applicants for enlistment, Porto Rican Regiment, year 1910.*

	Total.	
	Number.	Ratio per 1,000 rejected for all causes.
Under weight	15	238.10
Venereal diseases	6	95.24
Flat feet	6	95.24
Defects of vision	5	79.37
Diseases of the genito-urinary system (nonvenereal)	5	79.37
Chest development insufficient	5	79.37
Defects of development	5	79.37
Heart disease	4	63.49
Defective teeth	2	31.75
Curvature of the spine	2	31.75
Diseases of the organs of locomotion	2	31.75
Varicose veins	1	15.87
Varicocele	1	15.87
Diseases of the circulatory system	1	15.87
Diseases of the skin	1	15.87
Under height	1	15.87
Causes not physical	1	15.87
Total	63	1,000.00

Twenty-two and seven-tenths per cent of the rejections were caused by a deficiency in weight, 9.09 per cent each by venereal disease and flat feet, and 7.5 per cent by each of the following: Defect of vision, diseases of the genito-urinary system (nonvenereal), insufficient chest development, and defects of development.

HAWAII.

Only one island of the Hawaiian group is garrisoned, namely, Oahu, on which is situated the city of Honolulu. The mean strength of the garrison during the year was 1,220, as compared with 1,014 for 1909. In spite of its salubrious and temperate climate and the absence of the more serious epidemic diseases, the noneffective admission and discharge rates were higher than for the United States. This was owing to the high rate for venereal diseases, the intestinal diseases, and injuries. The death rate was lower, there being only

three deaths. The admission and noneffective rates were 1,009.84 and 49.88, as compared with 1,180.47 and 52.56 for 1909. The discharge and death rates were 17.14 and 2.45, as compared with 13.80 and 1.84 for 1909. In 1909 there were 10 cases of typhoid fever. Last year not a single case was reported and only two cases of undetermined fever. Twenty-one men were discharged on certificate of disability.

There are at present four posts garrisoned. At Schofield Barracks the definite location of the post has not been selected. Considerable difficulty has been experienced in disposing of the sewage in the temporary post. Cesspools have been used but proved very unsatisfactory. The present plan is to use the dry-earth system for disposal of the human excreta and to drain the other sewage after passing it through the cesspool into a neighboring gulch.

Forty-two men were invalided home. Eleven of these were for venereal diseases, 5 for tuberculosis, and 2 each for lymphadinitis (nonvenereal) and incised wounds. Each of the other 22 were for separate diseases. Twenty were returned to duty; 9 were discharged on certificate of disability; 1 died; 4 were otherwise disposed of; and 8 remained under treatment at the end of the year.

Several cases of cholera occurred among the civilian population of Honolulu during the early part of the present year. The proper precautionary measures were instituted at the posts, and no case occurred at any of them.

PHILIPPINE ISLANDS.

AMERICAN TROOPS.

The health of the American troops in the Philippines continues to improve year by year. As shown in Table No. 63 the admission rate for disease and the constantly noneffective rate were better for 1910 than for 1909, which was in turn better than for any preceding year. The death rate was, both for disease and external cause, lower than in 1909. Among the deaths from external causes there were 10 deaths from wounds; 3 for fractures, exclusive of gunshot, and 6 for drowning. Of the deaths from wounds there were two killed in action.

The mean strength of the American troops was 12,277, not including a force of native troops, the Filipino Scouts, with a mean strength of 5,093, for whom medical statistics will be given separately on page 116.

During the year there were 15,256 admissions, with a mean strength of 12,277, making an admission rate of 1,242.65, which was lower than the rate for 1909, which was 1,348.02. Of the command there was an average constantly noneffective of 558.04, making a noneffective rate of 45.45, which was lower than the rate of 52.57 for 1909. Both the admission and constantly noneffective rates for the American troops continue to be much higher than that for the Filipino troops, which is discussed on page 125. A total for all troops, American and Filipino, of 259,122 days, were lost in quarters and hospital. Of this number 164,359 were from causes incurred in line of duty and 94,763 not in line of duty.

The most important diseases showing a reduction are typhoid fever, undetermined fever, malarial fevers, dysenteries, venereal diseases,

alcoholism, and dengue. There was an increase for diarrhea and enteritis, and a slight increase for insanity, there being 23 cases in 1910 and 20 in 1909. There were three cases of cholera for American troops as compared with none for 1909. Two cases of smallpox occurred during the year. There were none in 1909.

The diseases causing the highest noneffective rates were venereal diseases, 17.72; malarial fevers, 2.32; dengue, 1.53; diarrhea and enteritis, 1.38; and dysenteries, 1.26. The principal causes of death were (absolute numbers), gunshot wounds, 9; drowning, 6; tuberculosis, 5; dysenteries, 4; fractures, exclusive of gunshot wounds, 3; and rheumatism, articular, 3. It should be noted that deaths occurring in the United States from diseases contracted in the Philippines are credited in this report to the stations of the regiment or organization to which the soldier belonged. Thus of the five deaths from tuberculosis credited to the Philippines, none of them occurred there, but all occurred among men invalided home for that disease.

PREVALENCE OF SPECIAL DISEASES, AMERICAN TROOPS.

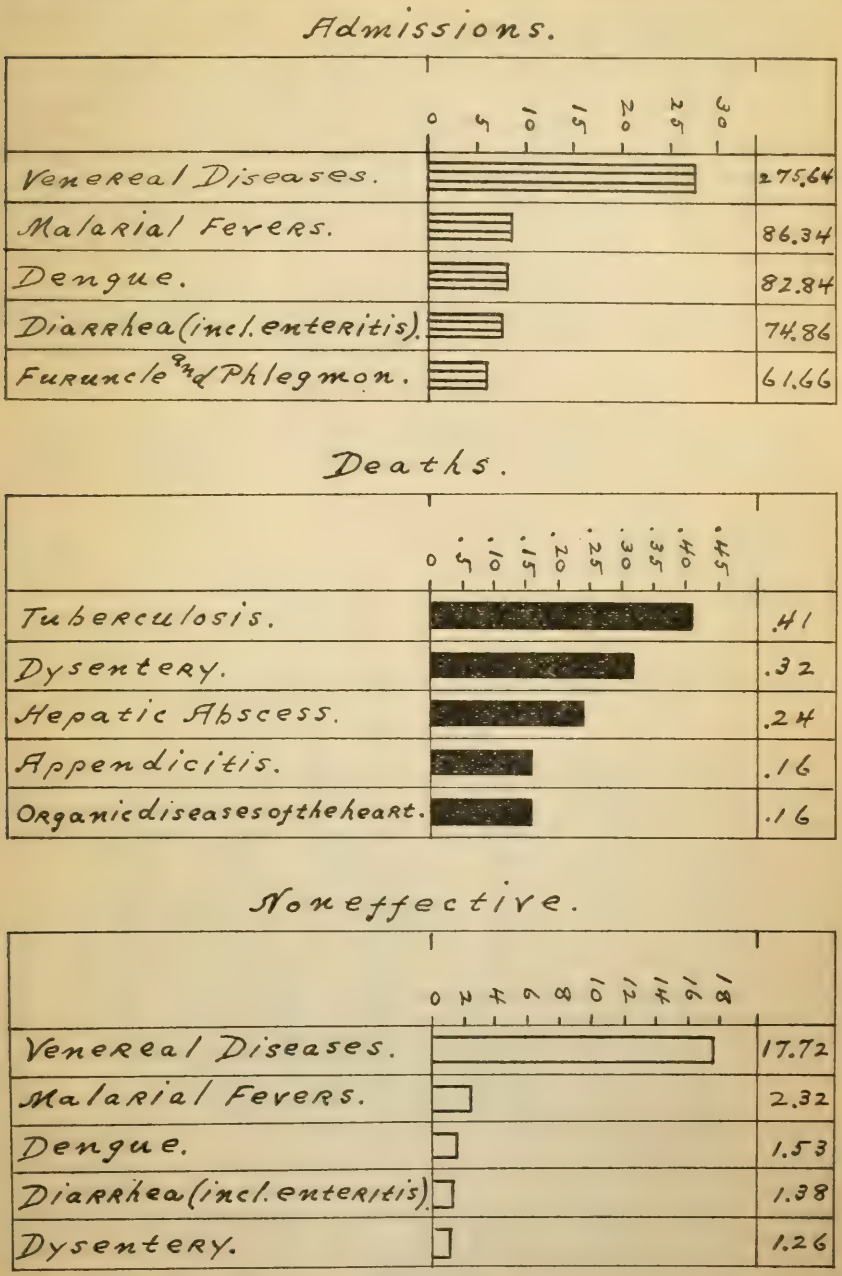
TYPHOID FEVER.

The admission rate was 2.53 per thousand as compared with 6.15 for 1909, and 2.76 for 1908. This rate was higher than that for the Army as a whole, which was 2.35. In absolute numbers, 31 cases occurred. Of this number 18 were at Ludlow Barracks, Parang, P. I. The epidemic which occurred there began in October, 1909, and continued until March, 1910. Mention is made of this epidemic in the last report. There were two deaths. No other epidemics of this disease occurred among the American troops. Such other cases as occurred were sporadic. Table No. 37, typhoid fever, Philippine Islands, follows:

TABLE No. 37.—*Typhoid fever, Philippine Islands, year 1910.*

Posts.	Mean strength.	Admissions.							
		Americans.				Philippine Scouts.		Total.	
		Officers.		Enlisted men.					
		Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Ludlow Barracks, Mindanao	529	1	.....	18	2	.....	.....	19	2
Camp Gregg, Luzon	351	.....	.....	.....	.....	11	.....	11	.....
Fort Mills, Luzon	1,420	.....	.....	4	.....	.....	.....	4	.....
Cuartel de Espana, Manila	532	.....	.....	3	.....	.....	.....	3	.....
Camp Jossman, Gulmaras	862	1	.....	1	.....	.....	.....	2	.....
Warwick Barracks, Cebu	417	.....	.....	2	.....	.....	.....	2	.....
Camp Wilhelm, Luzon	354	.....	.....	.....	.....	2	1	2	1
Fort William McKinley, Luzon	2,788	.....	.....	1	.....	.....	.....	1	.....
Fort Santiago, Manila	200	.....	.....	1	.....	.....	.....	1	.....
Division Hospital, Manila	104	1	.....	.....	.....	.....	.....	1	.....
Camp Downes, Leyte	295	.....	.....	1	.....	.....	.....	1	.....
Interisland transports	108	1	.....	.....	.....	.....	.....	1	.....
Total	18,360	4	.....	31	2	13	1	48	3

CHART P.—*Showing the relative admission, death, and noneffective ratios per thousand of mean strength for certain special diseases in the Philippine Islands (American troops).*



MALARIAL FEVER.

The admission rate for all fevers of this class was 86.34 as compared with 112.35 for 1909, 123.97 for 1908, 167.79 for 1907, 304.20 for 1906, and 261.55 for 1905. Malarial fevers stand second among causes of admission for American troops.

The problem of screening resolves itself into a question of funds. Neither the Quartermaster's Department nor the Medical Department has so far had sufficient funds to screen hospitals and barracks. Attempts have been made to screen mess halls and kitchens against flies principally. The authorities still rely on the mosquito bars to protect the men against the mosquitoes. The chief surgeon, Philippines Division, states that he knows of but one screened house in Manila outside of the military plaza.

It is the opinion of this office that this important sanitary measure should receive more attention than at present in the planning and construction of barracks, quarters, and hospitals in the Philippines.

UNDETERMINED FEVERS

The admission rate for these fevers was 10.75 as compared with 25.46 for last year. The various diagnoses under this head are as follows:

Febricula	66
Fever, simple, continued	14
Fever, type undetermined	46
Ephemeral fever	4
Thermic fever	2
Total	132

The rate for this class of fevers in the United States was 2.42.

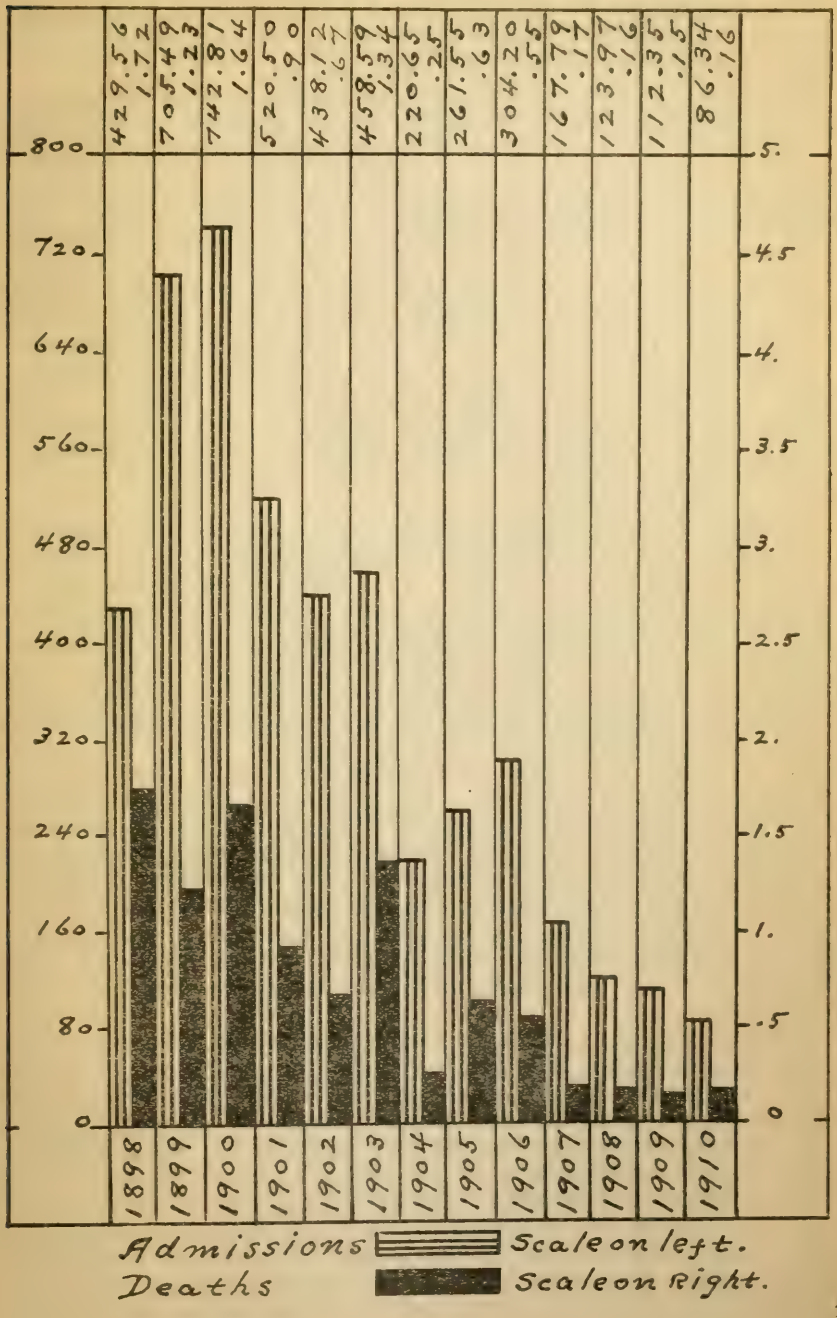
SMALLPOX.

Two cases of smallpox occurred among the American troops. There was no death from variola, nor has there been a death from this cause since 1906. Both cases occurred at Warwick Barracks, Cebu, P. I., and both men confessed to the surgeon, Lieut. Col. Woodruff, that though they had been vaccinated many times, they had always scraped off the wound as soon as dismissed from observation, and the last, a severe case, had actually sucked the place to be sure the vaccination would not be successful. It seems probable that the occurrence of smallpox in the Army is to a considerable extent due to intentional avoidance of vaccination as a result of acceptance of the reckless misstatements of antivaccination propagandists.

VENEREAL DISEASES.

Venereal diseases still hold first place. Over 90 per cent of the admissions for this cause were for the American troops. They constitute more than one-fifth of the total number of admissions for disease. There were 2,088 admissions for gonorrhea and sequelæ, 747 for venereal ulcer, and 549 for syphilis and sequelæ. Over one-third of the total number of days lost were for diseases incurred not in the line of duty and were due very largely to venereal diseases. The admission rate for American troops was 275.64 as compared with 301.85 for 1909 and 289.62 for 1908.

CHART Q.—*Showing the relative admission and death rates per thousand of mean strength for malarial diseases in the Philippine Islands (American troops), years 1898–1910.*



MEASURES INSTITUTED TO DIMINISH THE FREQUENCY OF VENEREAL INFECTIONS AND RESULTS.

The measures instituted in the division are as follows:

1. Examination of the commands for evidences of venereal diseases. This examination is made at the majority of the posts every two weeks, but at a few of them only once a month.

2. Treatment of all cases of venereal diseases in hospital until they are no longer infectious. At such posts of this class as are so intimately connected with the town that the two can not be separated geographically, this measure is considered advisable in order to prevent the infection of the prostitutes and the further spread of the disease. But as a general rule the measures adopted at Warwick Barracks, Cebu, and several other posts, of restricting all men suffering with gonorrhea to the limits of the post until cured, after they are returned to duty from the hospital, is believed to be very much more satisfactory.

3. At most of the posts lectures have been given to the men by a medical officer showing in detail the evil effects of venereal disease and encouraging chastity as the best safeguard. For those who were morally weak and unable to resist temptation, methods of prophylaxis and of avoiding as far as possible the contraction of these diseases have been described.

4. All of the post surgeons at the posts garrisoned by American troops with the exception of three report that some system of prophylaxis has been instituted. In a special room in the hospital or the barracks, which is always open, calomel ointment, argyrol solution or potassium permanganate, and syringes are always available for use. When these antiseptics are kept in the hospital an attendant is constantly present to give instructions and assist. It is, however, the opinion of some that better results are accomplished by placing the remedies in the barracks where the men have readier access to them. K packets are issued at the hospital when called for at a good many of the posts. The surgeon at Warwick Barracks states that the usual disinfectants were first kept at the hospital and later at the company quarters. Since May, 1910, prophylactic packages have been issued to the command. He reports that the results after issuing K packets were at first encouraging, but later, as shown by the venereal report, the instructions were not complied with. The issue of K packets was recommended by the surgeon at Camp Downes, but his recommendation was disapproved by the post commander.

The post surgeons at 10 of the posts garrisoned by the native troops report that no system of prophylaxis has been instituted. The chief reason assigned by them is that nearly all of the men were married and also that venereal diseases are very rare among them.

5. Post orders making it an offense punishable by courts-martial to contract venereal disease when the prophylactic treatment has not been used have been issued at several of the posts.

In the Department of Mindanao one of the medical officers of the post, usually the surgeon, is the health officer of the neighboring municipality. The sanitary control of the town is thus frequently in the hands of the post medical authorities. Among the sanitary measures instituted by these medical officers acting as health officers

is a regular weekly examination of all the recognized segregated prostitutes. However, in addition to these recognized prostitutes there are always a certain number of native Moro and Filipino prostitutes. It is to a great extent impossible to control these, and the continued prevalence of venereal disease in this department is believed to be largely due to them. They are arrested when detected and either deported as vagrants or examined and if found infected confined and treated. The admission rate in the Department of Mindanao was 189.82, as compared with 291.07 for the Department of Luzon and 368.91 for the Visayas.

At Batangas, near Camp McGrath, the prostitutes are examined twice a month. The surgeon at Camp John Hay, near Baguio, states that the examination is made there by a representative of the bureau of health.

However, in spite of the above-described well-conducted system of education and prophylaxis, the rate for venereal diseases in the Philippines for the calendar year of 1910 was 275.64, as compared with 301.85 for 1909 and 289.62 for 1908. The rates for the United States was 155.51 for 1910 and 177.46 for 1909. Probably the higher rate in the Philippines is due to (1) the abundance of native prostitutes ("There aint no ten commandments" in the Philippines, as well as in the other countries "east of the Suez"); (2) the small price for which the prostitutes offer themselves (in some cases 25 cents); (3) their lack of knowledge of all sanitary and hygienic measures for their own protection and that of others, and (4) the great prevalence of venereal diseases among them.

In addition to the above it must be realized that the American soldier in the Philippine Islands is in very great need of wholesome amusements and associations. Owing to the scarcity of these, the men in seeking amusement drift into the neighboring barrios where they find the ever-present American saloon, the native intoxicating drinks, the houses of prostitution, and the native clandestine prostitutes. One of the chaplains says:

> The demoralizing influence of the barrios is, as at other posts in the islands, playing havoc with morals and physical condition of the men. This can only be offset, even to a degree, by giving them a large, well-lighted, attractive room for a loafing place, with all kinds of amusements. If a good magic lantern could be passed around among the chaplains with a large number of sets of slides for lectures, it would help.

Posts in the Philippines having a mean strength of more than 300 men (American troops only), year 1910.

Posts.	Admissions.		Mean strength.
	Total.	Ratio.	
Camp Stotsenburg	465	498.39	933
Camp Jossman	357	414.15	862
Warwick Barracks	169	405.28	417
Camp Gregg	124	353.28	351
Fort William McKinley	799	286.59	2,788
Augur Barracks	254	274.59	925
Cuartel de Espana	124	233.08	532
Camp Keithley	155	163.33	949
Camp McGrath	92	143.53	641
Ludlow Barracks	75	141.78	529
Torrey Barracks	45	133.93	336
Fort Mills	184	129.58	1,420
Pettit Barracks	50	121.65	411
Camp Overton	57	117.04	487

CHOLERA.

Cholera continues to prevail throughout the archipelago. According to the reports received by the bureau of health for 1910, 8,972 cases occurred in the Provinces, with 6,570 deaths. This was an increase over the year of 1909, when there were 8,055 in the Provinces with 5,524 deaths. In the city of Manila there were 310 confirmed cases, with 224 deaths. In 1909 there were 263, with 211 deaths. Two cases occurred among the American soldiers at Fort William McKinley, both of whom recovered. One case which occurred in an American at Camp Gregg resulted fatally. It was impossible in any of these cases to trace the source of infection. Cholera was epidemic in Batangas near Camp McGrath and the other neighboring towns from August 17, 1910, until November 1, 1910. There were 1,427 cases, with 922 deaths. There was no case in the post at any time. When it is remembered that cholera occurs in epidemic form in so many native towns adjacent to our military posts, it must be recognized that the almost entire immunity of the troops is due to the excellent sanitary measures adopted for its prevention, and that cases do not occur frequently is due to the thoroughness with which these measures are carried out both by the officers and enlisted men.

TUBERCULOSIS.

There were 67 cases of tuberculosis among the American troops, a ratio of 5.46 per 1,000. All of these cases were promptly transferred to the United States and there was no death from this disease among the American troops in the Philippine Islands.

BERIBERI.

No case of this disease occurred among the American troops.

PTOMAINE POISONING.

Two outbreaks of ptomaine poisoning occurred at Fort William McKinley, Rizal, P. I., during June, 1910. One of these outbreaks occurred in an organization where a meat-potato hash had been served, and this was believed to have been the cause. The other one was thought to have been due to ice cream made from canned milk into which it was believed air had gained entrance through a rust hole or other leak. Seventy-two cases in all occurred, with no death. At this same post in July, 1910, 39 cases occurred in Troops A and F, Twelfth Cavalry, United States Army. These two troops messed together, and an investigation which was made strongly pointed to meat-potato-onion fritters as the cause. A decided effort was at once made by the surgeon, Maj. W. E. Purviance, to prevent a recurrence of ptomaine poison. A special communication was addressed to the adjutant general of the post inviting attention to the then recent outbreaks and outlining measures to be taken to prevent a recurrence. In addition a medical officer was detailed to deliver a lecture to the cooks of all the organizations of the post on methods of preparation and care of foods, with special reference to the prevention of ptomaine poisoning. A severe outbreak of pto-

maine poisoning occurred at Camp Keithley, Mindanao, P. I., May 7 to 11, 1911. There were in all 61 cases, with no deaths. The following is from the report of the surgeon, Maj. Shockley:

Symptoms.—Marked physical and mental depression. Erythema from dilated capillaries, face and chest. General emesis and diarrhea, fecal and later serous. Some cases showed considerable temperature and depression with few gastrointestinal symptoms.

Course and character of cases.—Cases admitted on first and second days proved most severe, all symptoms persisting for 48 hours and then gradually declining. One case showed persistent hiccough for 48 hours; another persistent vomiting for 3 days. Suppression of urine in three severe cases, with one mild acute nephritis.

It is the opinion of Maj. Shockley that this outbreak was due to decomposition changes in beef due to errors in transportation and refrigeration. The beef was used on the evening of May 6 and morning of May 7. The beef used at Camp Keithley is transported in wagon from Camp Overton, and is several hours in transit. The surgeon recommended that the following measures be taken temporarily to prevent decomposition changes in beef furnished.

1. Careful selection of frozen carcasses at Camp Overton for transportation to Camp Keithley.
2. Abundant icing of wagons transporting carcasses or quarters.
3. Transportation of meat from Overton at night only, without stop and in the least possible time.
4. The storage of not more than three days' supply in Keithley refrigerator.
5. Abundant icing of Keithley refrigerator.
6. Construction of vestibule to Keithley refrigerator.

The surgeon at Fort Wint, Grande Island, P. I., reported that an epidemic of acute catarrhal interoileocolitis, due to the use of musty flour, occurred at that post October 29 to November 2, 1910. There were 14 cases treated in hospital, 4 in quarters, and many more cases who suffered from a mild form of this trouble were prescribed for but remained on full duty. In some of the cases the vomiting and purging was quite severe, so much so as to resemble Asiatic cholera.

DYSENTERY.

The occurrence of this disease shows a marked decrease, being 19.39 as compared with 43.06 for 1909 and 26.23 for 1908. The proportion of amœbic to bacillary infection was 3.29 to 1, as compared with 1.58 to 1 for 1909, 3.31 to 1 for 1908, and 17 to 1 for 1907. The actual number of amœbic was 164, as compared with 238 for 1909, and 149 for 1908, while for the bacillary type there were 46 cases, as compared with 150 for 1909 and 45 for 1908.

DENGUE.

There were 1,017 admissions, as compared with 1,672 for 1909 and 1,162 for 1908. There were no deaths or discharges due to this disease. The constant noneffective rate was 1.53. This disease constitutes rather an inconvenience than a sanitary danger.

ALCOHOLISM AND ITS RESULTS.

The admission rate, 28.26, was somewhat higher than the rate for 1909, 22.19, and 25.31 for 1908. This rate was for white troops, as there were no colored troops in the islands.

INSANITY.

The admission rate for insanity was 1.87, as compared with 1.56 for 1909 and 1.09 for 1908. The rate for the United States was 1.58, as compared with 1.63 for 1909. For white troops in the United States it was 1.54 (1.62 for 1909), and for colored 2.34 (2.04 for 1909).

DIARRHEA AND ENTERITIS.

The admission rate for these diseases was 74.86, as compared with 59.79 for 1909, 85.21 for 1908, 74.43 for 1907, and 130.69 for 1906.

TOTAL RATE FOR DISEASES AND EXTERNAL CAUSES.

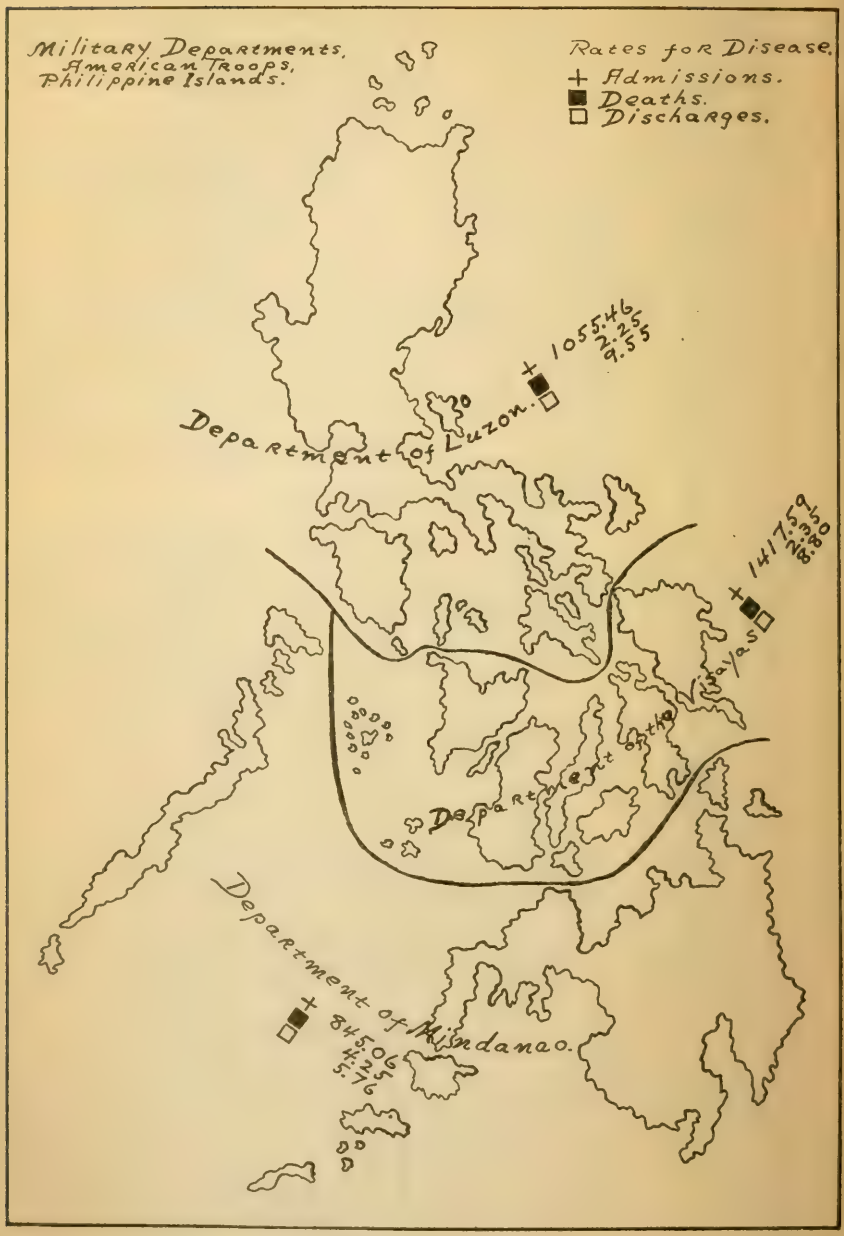
The total rate for admission for all diseases was 1,048.22, which was lower than that for 1909, which was 1,156.49. The rate for external causes was a little higher, being 194.43, as compared with 191.53 for 1909. The total rate for all diseases and external causes for 1910 was 1,242.65 and for 1909 it was 1,348.02. In the United States the rate for diseases was 715.54; for external causes, 183.71; and total for all causes, 899.25.

INFLUENCE OF STATION.

The Department of Visayas had the highest admission rate and the Department of Mindanao the lowest. For deaths the Department of Mindanao had the highest rate and Visayas the lowest. For total noneffective rate from sickness Visayas had the highest, Luzon the lowest. Visayas also had the highest average for the number of days lost and Luzon the lowest.

TABLE NO. 38.—*Movement of sick American troops in the Philippines.*

Departments and islands.	Mean strength.	Ratio per 1,000 of mean strength.										Average number of days lost.			
		Admissions to sick report.		Discharged on certificate of disability.		Deaths.		Total losses.		Noneffective from sickness.				From all causes.		Excluding injuries, venereal diseases, vaccinia, and alcoholism.	
		From all causes.	Excluding injuries, venereal diseases, vaccinia, and alcoholism.	From all causes.	Excluding injuries, venereal diseases, vaccinia, and alcoholism.	From all causes.	Excluding injuries, venereal diseases, vaccinia, and alcoholism.	From all causes.	Excluding injuries, venereal diseases, vaccinia, and alcoholism.	From all causes.		Excluding injuries, venereal diseases, vaccinia, and alcoholism.		For each soldier.	For each case.	For each soldier.	For each case.
										Total.	In hospital.	Total.	In hospital.				
Department of Luzon	7,122	1,279.42	732.52	11.09	8.85	4.21	2.11	15.30	10.96	37.14	31.97	16.61	14.36	13.56	10.60	6.07	8.28
Department of the Visayas	1,705	1,542.52	1,015.84	9.38	8.21	4.11	1.17	13.49	9.38	45.15	42.24	23.44	21.61	16.48	10.68	8.56	8.42
Samar Island	22	227.27	181.82							6.72	4.61	5.73	4.61	2.45	10.80	2.09	11.50
Leyte Island	314	907.64	531.85	6.37	6.37	3.18		9.55	6.37	26.34	25.57	13.79	13.45	9.61	10.59	5.04	9.47
Guimaras Island	815	1,974.23	1,371.78	14.72	12.27	4.91	2.45	19.63	14.72	57.82	53.08	30.97	27.87	21.10	10.69	11.30	8.24
Cebu Island	390	1,443.59	858.97	5.13	5.13	5.13		10.26	5.13	41.31	39.34	19.30	18.24	15.08	10.45	7.04	8.20
Panay Island	164	1,024.39	658.54							32.53	32.19	16.76	16.47	11.87	11.59	6.12	9.29
Department of Mindanao	3,298	1,012.43	637.36	6.97	4.85	6.67	4.25	13.64	9.10	37.43	35.87	18.25	17.44	13.66	13.50	6.66	10.45
Mindanao Island	2,471	947.39	588.83	5.67	4.45	7.28	4.45	12.95	8.90	32.92	31.25	17.12	16.26	12.02	12.68	6.25	10.62
Jolo Island	827	1,206.77	782.35	10.88	6.05	4.84	3.63	15.72	9.68	50.91	49.66	21.62	20.95	18.58	15.40	7.89	10.09
Total	12,277	1,242.65	744.07	10.14	8.11	5.19	2.84	15.33	10.95	45.45	41.60	22.19	20.40	16.59	13.35	8.10	10.77


Military Departments,
American Troops,
Philippine Islands.
Rates for Disease.
+ Admissions.
■ Deaths.
□ Discharges.
1055.46
2.25
9.55
Department of Luzon.
1417.59
Department of the Visayas
Department of Mindanao.
845.06
4.25
5.76

INFLUENCE OF SEASON.

Exclusive of injuries, venereal diseases, alcoholism, and vaccinia, which are not influenced by season, the highest admission rate occurred in July and the second highest in June. The highest noneffective rate was in March and the second highest in June. The highest rate for malarial fevers was in March, for dengue in November, and for diarrhea and enteritis in June. The lowest admission rate was in April. The lowest noneffective rate was in December. The highest death rate occurred in August and the lowest in May and December. As the influence of season varies so widely for the different islands, it is hardly possible to obtain any accurate information by comparing the division as a whole.

TABLE No. 39.—*Influence of season on American troops in the Philippines.*

Months.	Mean strength.	Ratio per 1,000 of mean strength.								Prevailing diseases (exclusive of venereal diseases, etc.).
		All causes.					Exclusive of venereal diseases, alcoholism, vaccinia, and injuries.			
		Admissions.			Noneffective.					
		Total.	Hospital.	Deaths.	Total.	Hospital.	Admissions.	Deaths.	Noneffective.	
January....	12,263	110.17	94.92	0.37	47.10	43.55	60.02	0.37	21.03	Malarial, 124; dengue, 102; diarrhea, 59; constipation, 35.
February..	12,410	95.25	59.79	.40	47.61	43.32	52.21	.16	21.24	Malarial, 107; diarrhea, 53; dengue, 51.
March.....	12,338	108.61	86.89	.31	50.51	45.80	65.57	.31	26.90	Malarial, 201; diarrhea, 48; dengue, 43; acute bronchitis, 24.
April.....	12,078	88.42	74.10	.32	46.82	42.95	47.28	.16	20.92	Malarial, 85; diarrhea, 37; constipation 26; tonsillitis, 22.
May.....	12,319	112.59	97.66	.49	46.47	42.17	61.21	.08	20.41	Diarrhea, 115; malarial, 87; dyspepsia, 29.
June.....	12,496	116.36	101.31	.50	48.76	44.40	72.18	.25	23.82	Diarrhea, 189; malarial, 81; dengue, 45; dyspepsia, 42.
July.....	12,375	114.18	101.58	.42	44.91	41.38	72.97	.25	23.57	Diarrhea, 170; dengue, 86; dyspepsia, 80; malarial, 72.
August....	12,122	106.42	96.94	.85	43.43	39.73	67.07	.59	22.45	Malarial, 73; dengue, 66; diarrhea, 66; dyspepsia, 60.
September.	11,754	105.07	88.14	.26	46.54	42.48	64.32	.....	22.63	Dengue, 95; diarrhea, 47; dyspepsia, 35; malarial, 32.
October....	12,140	104.12	88.80	.42	44.27	40.68	66.64	.34	22.50	Dengue, 169; diarrhea, 50; malarial, 49.
November.	12,623	91.34	83.41	.49	40.87	38.05	59.81	.25	21.44	Dengue, 192; malarial, 59; diarrhea, 56.
December..	12,400	90.24	79.03	.40	38.58	35.06	54.76	.08	19.29	Dengue, 137; malarial, 90; diarrhea, 29; dysentery, 26.
Total.	12,277	1,242.65	1,052.46	5.19	45.45	41.60	744.07	2.84	22.19	Malarial, 1,060; dengue, 1,017; furunculosis, 480; acute abscess, 277; constipation, 250; muscularrheumatism, 243; dyspepsia, 240; dysentery, 238.

INFLUENCE OF AGE (DISEASE ONLY).

Excluding injuries, the highest admission and noneffective rates were noted for soldiers between 20 and 24 years of age. The highest death rate was for those over 45 and the lowest for those between 40 and 44. The highest discharge rate was for those between 25 and 29 and the lowest for those between 45 and 49.

LENGTH OF SERVICE (DISEASE ONLY).

Excluding injuries, the highest admission and noneffective rates occurred in the second year of service; the second highest admission and noneffective rates in the third year; the lowest admission in the fourth year: and the lowest noneffective in those having ten years or more service. The highest discharge rate occurred in the first year and the lowest in those having over ten years' service. The highest death rate occurred among those having more than ten years' service and the lowest in the fourth year of service.

TABLE No. 40.—*Influence of disease by age and length of service on American troops in the Philippines.*

Length of service.	Mean strength.	Admitted.	Discharged on certificate of disability.	Died.	Constantly noneffective.	Ratios per 1,000 of mean strength.			
						Admitted.	Discharged on certificate of disability.	Died.	Constantly noneffective.
Under 1 year	530	621	13	1	19.86	1,171.70	24.39	1.86	37.48
1 to 2 years	1,585	2,200	24	2	96.00	1,388.01	15.08	1.26	60.58
2 to 3 years	3,803	4,632	31	11	189.10	1,199.07	7.99	2.83	48.95
3 to 4 years	684	495	5	.....	20.82	723.68	7.28	.....	30.44
4 to 5 years	891	824	11	3	34.25	924.81	12.29	3.35	38.44
5 to 10 years	2,495	2,458	14	8	77.87	985.17	5.59	3.19	31.21
10 years and over	2,229	1,639	11	13	57.29	735.31	4.91	5.81	25.70
Total	12,277	12,869	109	38	495.22	1,048.22	8.84	3.08	40.34

Age.	Mean strength.	Admitted.	Discharged on certificate of disability.	Died.	Constantly noneffective.	Ratios per 1,000 of mean strength.			
						Admitted.	Discharged on certificate of disability.	Died.	Constantly noneffective.
19 years and under	193	180	1	1	6.85	932.64	5.15	5.15	35.48
20 to 24 years	4,300	5,802	38	7	233.23	1,349.30	8.79	1.62	54.24
25 to 29 years	3,593	3,745	39	12	138.15	1,042.30	10.81	3.32	38.45
30 to 34 years	2,083	1,690	16	6	60.39	811.33	7.65	2.87	29.00
35 to 39 years	1,098	817	10	6	31.42	744.08	9.07	5.44	28.61
40 to 44 years	631	390	4	1	14.45	618.07	6.31	1.58	22.90
45 to 49 years	282	187	1	3	8.20	663.12	3.53	10.60	29.07
50 years and over	97	58	.....	2	2.53	597.94	.....	20.62	26.07
Total	12,277	12,869	109	38	495.22	1,048.22	8.84	3.08	40.34

CHART R.—*Showing by ages the relative noneffective and death ratios per thousand of mean strength for disease in the Philippine Islands (American troops) for five years from 1906.*

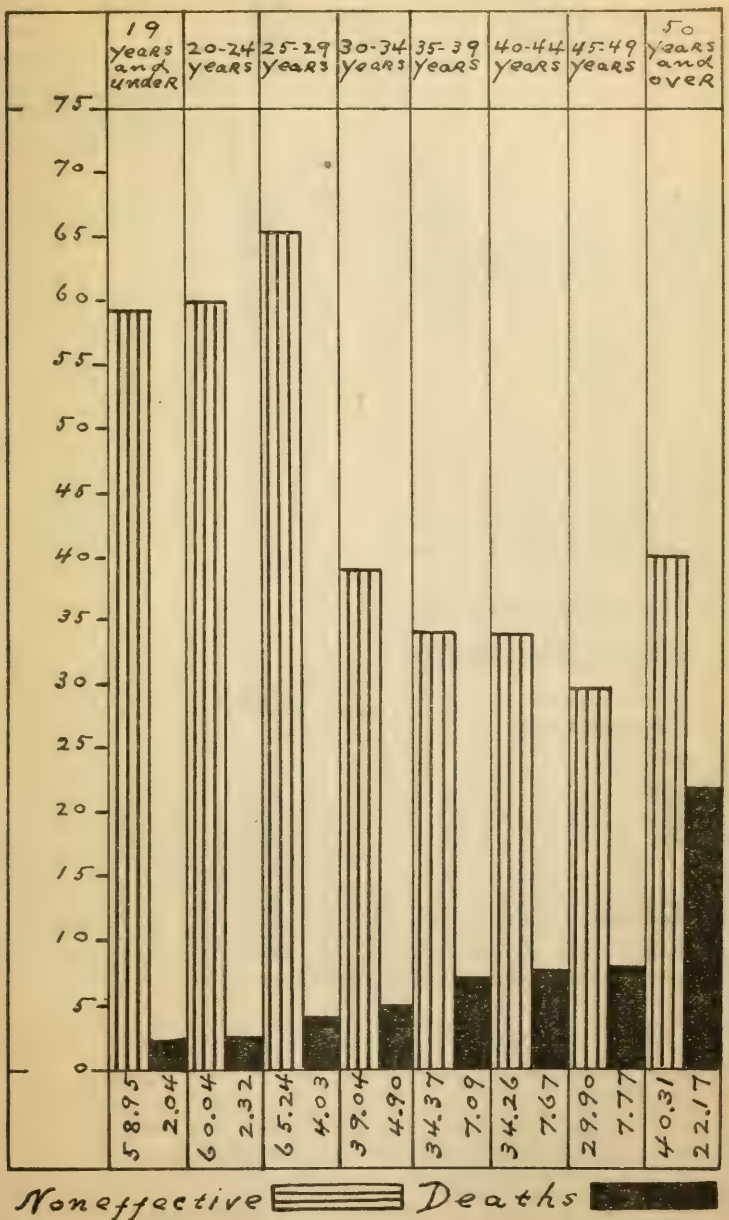


TABLE NO. 41.—*Discharges for disability, American troops in the Philippine Islands.*

Causes of discharge.	Number discharged.	Percentage of discharges for disease.	Discharged for disability.				
			In line of duty.	Not in line of duty.		Discharged for disability before assignment.	
				Contracted before enlistment.	Contracted after enlistment.	In line of duty.	Not in line of duty.
General diseases	69	63.30	60	.....	9	.....	.....
Tuberculosis (of the lungs, 55; other organs, 1).	56	51.38	56	.....	.....	.....	.....
Venereal diseases	8	7.34	.....	.....	8	.....	.....
Syphilis (secondary, 1; tertiary, 1)	2	1.83	.....	.....	2	.....	.....
Gonorrhea and results (gonorrheal rheumatism, 3; chronic gonorrhea, 2; panophthalmitis, 1).	6	5.50	.....	.....	6	.....	.....
Chronic amebic dysentery	2	1.83	2	.....	.....	.....	.....
Malarial cachexia	1	.92	1	.....	.....	.....	.....
Chronic articular rheumatism	1	.92	1	.....	.....	.....	.....
Chronic alcoholism	1	.92	.....	.....	1	.....	.....
Diseases of the nervous system	18	16.51	12	6	.....	.....	.....
Insanity	9	8.26	6	3	.....	.....	.....
Epilepsy	3	2.75	1	2	.....	.....	.....
Diseases of the spinal cord	2	1.83	2	.....	.....	.....	.....
Hysteria	2	1.83	1	1	.....	.....	.....
Locomotor ataxia	1	.92	1	.....	.....	.....	.....
Neurasthenia	1	.92	1	.....	.....	.....	.....
Diseases of the circulatory system	9	8.26	9	.....	.....	.....	.....
Organic disease of the heart	7	6.42	7	.....	.....	.....	.....
Chronic phlebitis	1	.92	1	.....	.....	.....	.....
Cardiac irritability	1	.92	1	.....	.....	.....	.....
Diseases of the organs of special sense	7	6.42	7	.....	.....	.....	.....
Diseases of the middle and internal ear (otitis media)	5	4.59	5	.....	.....	.....	.....
Deafness	1	.92	1	.....	.....	.....	.....
Chronic trachoma both eyes	1	.92	1	.....	.....	.....	.....
Congenital malformations and arrested development	3	2.75	.....	3	.....	.....	.....
Diseases of the respiratory system (chronic asthma)	2	1.83	2	.....	.....	.....	.....
Diseases of the organs of locomotion (flat feet)	1	.92	1	.....	.....	.....	.....
Total	109	100.00	91	9	9	.....	.....
EXTERNAL CAUSES.							
Gunshot wounds	5	31.25	5	.....	.....	.....	.....
Fractures	4	25.00	4	.....	.....	.....	.....
Punctured wounds	4	25.00	4	.....	.....	.....	.....
Incised wounds	1	6.25	.....	.....	1	.....	.....
Lacerated wounds	1	6.25	.....	.....	1	.....	.....
Old subluxation	1	6.25	.....	1	.....	.....	.....
Total	16	100.00	13	1	2	.....	.....
Total for diseases	109	87.20	91	9	9	.....	.....
Total for external causes	16	12.80	13	1	2	.....	.....
Grand total	125	100.00	104	10	11	.....	.....

TABLE NO. 42.—*Enlisted men invalided home from the Philippine Islands.*

Causes.	Number of cases.	Percentage of total cases.	Duty.	Discharged on certificate of disability.	Died.	Otherwise disposed of.	Remaining at end of year.
Tuberculosis	64	25.81	.....	30	1	1	32
Venereal diseases	21	8.47	8	5	1	3	4
Dysentery	15	6.05	11	2	.....	2	.....
Insanity	15	6.05	2	4	.....	1	8
Diseases of the middle and internal ear	11	4.44	3	5	.....	.....	3
Neurasthenia	10	4.03	7	.....	.....	.....	3
Asthma	8	3.23	5	2	.....	.....	1
Typhoid fever	7	2.82	6	1	.....	.....	.....
Enteritis	7	2.82	2	1	.....	.....	4
Secondary results of injury	7	2.82	.....	3	.....	.....	4
Organic diseases of the heart	6	2.42	1	5	.....	.....	.....
Chronic bronchitis	6	2.42	3	.....	.....	1	2
Sprue	6	2.42	4	1	.....	.....	1
Other diseases of the nervous system	4	1.61	1	2	.....	.....	1
Chronic nephritis	4	1.61	1	.....	.....	1	2
Malarial cachexia	3	1.21	1	1	.....	.....	1
Chronic articular rheumatism	3	1.21	2	1	.....	.....	.....
Anemia	3	1.21	2	.....	.....	.....	1
Cirrhosis of the liver	3	1.21	.....	2	.....	1	.....
Punctured wounds	3	1.21	.....	3	.....	.....	.....
Chronic alcoholism	2	.81	1	1	.....	.....	.....
Other diseases of the spinal cord	2	.81	.....	1	.....	.....	1
Trachoma	2	.81	.....	2	.....	.....	.....
Functional diseases of the heart	2	.81	1	1	.....	.....	.....
Pneumonia	2	.81	2	.....	.....	.....	.....
Gastritis	2	.81	1	.....	.....	.....	1
Other diseases of the joints except tuberculosis and rheumatism	2	.81	1	1	.....	.....	.....
Congenital malformations	2	.81	.....	2	.....	.....	.....
Other fractures, exclusive of gunshot	2	.81	.....	.....	.....	.....	2
Gunshot wounds	2	.81	.....	2	.....	.....	.....
Aestivo-autumnal fever	1	.40	.....	.....	.....	1	.....
Cancer of the buccal cavity	1	.40	.....	.....	.....	.....	1
Epilepsy	1	.40	.....	1	.....	.....	.....
Neuralgia	1	.40	.....	.....	.....	.....	1
Neuritis	1	.40	.....	.....	.....	1	.....
Errors of refraction	1	.40	1	.....	.....	.....	.....
Diseases of the tympanum	1	.40	.....	1	.....	.....	.....
Other diseases of the arteries	1	.40	1	.....	.....	.....	.....
Phlebitis	1	.40	.....	.....	.....	.....	1
Other diseases of the circulatory system	1	.40	.....	.....	.....	.....	1
Chronic nasal catarrh	1	.40	1	.....	.....	.....	.....
Pulmonary emphysema	1	.40	1	.....	.....	.....	.....
Chronic diarrhea	1	.40	1	.....	.....	.....	.....
Other hernia	1	.40	.....	.....	.....	.....	1
Hepatic abscess	1	.40	.....	.....	1	.....	.....
Acne indurata	1	.40	.....	.....	.....	.....	1
Pemphigus contagiosus	1	.40	1	.....	.....	.....	.....
Muscular rheumatism	1	.40	1	.....	.....	.....	.....
Other diseases of the organs of locomotion	1	.40	.....	1	.....	.....	.....
Fracture of the spinal column	1	.40	1	.....	.....	.....	.....
Sprain	1	.40	.....	.....	.....	1	.....
Under observation	1	.40	.....	.....	.....	1	.....
Total cases	248	100.00	73	81	3	14	77
Percentage of total cases	.....	.....	29.43	32.66	1.21	5.65	31.05

TABLE No. 43.—*Causes of death, American troops, Philippine Islands.*

Causes of death.	Number of deaths.	Ratios per 1,000 of—	
		Mean strength.	Deaths from disease.
DISEASES.			
Tuberculosis (of the lungs, 3; other organs, 2)	5	0.41	131.58
Dysentary (amebic, 2; bacillary, 2)	4	.32	105.26
Cerebral meningitis	3	.24	78.95
Abscess of the liver	3	.24	78.95
Typhoid fever	2	.16	52.63
Malarial fever (estivo-autumnal)	2	.16	52.63
Acute alcoholism	2	.16	52.63
Gastric ulcer	2	.16	52.63
Appendicitis	2	.16	52.63
Endocarditis (acute, 1; chronic, 1)	2	.16	52.63
Cholera	1	.08	26.32
Septicemia	1	.08	26.32
Rabies	1	.08	26.32
Diabetes mellitus	1	.08	26.32
Delirium tremens	1	.08	26.32
Apoplexy	1	.08	26.32
Brain abscess, following otitis media	1	.08	26.32
Pneumonia	1	.08	26.32
Pancreatitis hemorrhagic	1	.08	26.32
Chronic nephritis	1	.08	26.32
Unknown (absent from post)	1	.08	26.32
Total	38	3.08	.....
EXTERNAL CAUSES.			
Gunshot wounds (suicides, 3; homicides, 2; killed in action, 2; accidental, 2)	9	0.73	346.15
Drowning (all accidental)	6	.49	230.77
Fractures (of skull, 2; of spine, 1—all accidental)	3	.24	115.38
Crushing (in railroad wreck, 1; by falling earth, 1; by overturning of gun carriage at drill, 1)	3	.24	115.38
Penetrating wound of abdomen by shaft of vehicle (accidental)	1	.08	38.46
Scalds received in railroad accident	1	.08	38.46
Heat exhaustion	1	.08	38.46
Ptomaine poisoning	1	.08	38.46
By hanging—suicide while insane	1	.08	38.46
Total	26	2.11	.....
Total diseases	38	3.08	593.75
Total external causes	26	2.11	406.25
Grand total	64	5.19	.....

PHILIPPINE SCOUTS.

The following table shows the amount of sick for the year:

TABLE No. 44.—*Movement of sick, Philippine Scouts, year 1910.*

	From all causes.		Excluding injuries, venereal diseases, vaccinia, and alcoholism.	
	Total.	In hospital.	Total.	In hospital.
Ratio per 1,000 of mean strength:				
Admissions to sick report	876.10	772.04	684.27	.....
Discharges on certificate of disability	6.79	.....	6.04	.....
Deaths	4.34	.....	3.58	.....
Total losses	11.13	.....	9.62	.....
Noneffective	26.01	24.19	18.73	17.56
Average number of days lost:				
For each soldier	9.49	8.83	6.84	6.41
For each case	10.83	11.43	9.99	.....

The most conspicuous feature of the nosological history of the Philippine Scouts for the year 1910 is the eradication of beriberi from among them, a disease which the preceding year caused 41 per cent of the total loss. This is fully described under special diseases and is well illustrated by charts.

The admission rate is less than for the preceding year, being 876.10 as compared with 937.98. The total loss is also lower, being 11.13 as compared with 21.84 for 1909. The noneffective rate is lower than for last year, being 26.01 as compared with 35.11. In the total losses, the death rate was lower, being 4.34 as compared with 7.40, and the discharge rate was also lower, being 6.79 as compared with 14.44. The admission rate for malarial fever is 243.47 as compared with 203.95; dysentery, 10.01 as compared with 9.50; venereal diseases, 62.05 as compared with 48.61; diarrhea and enteritis, 29.84 as compared with 38.74; beriberi, 11 as compared with 103.93; Asiatic cholera, 0.20 as compared with 1.68; and tuberculosis (all), 3.34 as compared with 5.96. The rate of deaths from disease was much lower, being 3.58 as compared with 6.14, and the rate for external causes was also lower, being 0.75 as compared with 1.26. Four scouts were wounded in action.

TABLE NO. 45.—*Causes of death among Philippine Scouts, year 1910.*

Causes of death.	Number of deaths.	Ratio per 1,000 of—	
		Mean strength.	Total deaths.
DISEASES.			
Tuberculosis (of the lungs, 4; other organs, 1)	5	0.94	263.16
Malarial fever (tertian, 2; estivo autumnal, 1)	3	.57	157.89
Beriberi	2	.38	105.26
Unknown	2	.38	105.26
Typhoid fever	1	.19	52.63
Mastoiditis and purulent meningitis	1	.19	52.63
Pulmonary hemorrhage	1	.19	52.63
Pneumonia	1	.19	52.63
Hepatic abscess	1	.19	52.63
Appendicitis	1	.19	52.63
Chronic nephritis	1	.19	52.63
Total	19	3.58	.....
EXTERNAL CAUSES.			
Incised wound (homicidal)	1	.19	250.00
Punctured wound (homicidal)	1	.19	250.00
Rupture of spleen (accidental: fall from wagon)	1	.19	250.00
Sunstroke	1	.19	250.00
Total	4	.75	.....
Total diseases	19	3.58	826.09
Total external causes	4	.75	173.91
Grand total	23	4.34	.....

The principal differences from the preceding year was 5 deaths from tuberculosis as compared with none for 1909; 3 deaths from malarial fevers as compared with none; 2 deaths for beriberi as compared with 12, and no deaths from asiatic cholera as compared with 7. There were 4 deaths from external causes as compared with 7 for last year.

DISCHARGES FOR DISABILITY.

The next table shows all discharges for disability.

TABLE No. 46.—*Causes of discharge for disability, Philippine Scouts, year 1910.*

Causes of discharge.	Number discharged.	Percentage of discharges for disease.	In line of duty.	Not in line of duty.	
				Contracted before enlistment.	Contracted after enlistment.
DISEASES.					
Tuberculosis (of the lungs, 14; of other organs, 1)	15	46.87	15	.....	.....
Chronic nephritis	4	12.50	4	.....	.....
Beriberi	2	6.25	2	.....	.....
Mental aberration following typhoid fever	1	3.12	1	.....	.....
Insanity	1	3.12	1	.....	.....
Epilepsy	1	3.12	1	.....	.....
Chronic neuritis	1	3.12	1	.....	.....
Chronic trachoma	1	3.12	1	.....	.....
Retino choroidal atrophy, bilateral	1	3.12	.....	1	.....
Organic heart disease	1	3.12	1	.....	.....
Aneurism	1	3.12	1	.....	.....
Chronic bronchitis	1	3.12	1	.....	.....
Gangrene following phlegmon	1	3.12	1	.....	.....
Chronic synovitis	1	3.12	1	.....	.....
Total	32	.....	31	1	.....
EXTERNAL CAUSES.					
Fractures (accidental)	2	50.00	2	.....	.....
Gunshot wound (received in action)	1	25.00	1	.....	.....
Results of old gunshot wound	1	25.00	.....	1	.....
Total	4	.....	3	1	.....
Total diseases	32	88.89	31	1	.....
Total external causes	4	11.11	3	1	.....
Grand total	36	.....	34	2	.....

The most notable differences in this table from the preceding year are two discharges for beriberi as compared with 33 for 1909; 15 for tuberculosis as compared with 28; and 4 chronic nephritis as compared with 1.

INFLUENCE OF SEASON.

The following table shows the influence of season:

TABLE No. 47.—*Influence of season on Philippine Scouts, year 1910.*

Months.	Mean strength.	Ratio per 1,000 of mean strength.								Prevailing diseases (exclusive of venereal diseases, etc.).
		All causes.					Exclusive of venereal diseases, alcoholism, vaccinia, and external causes.			
		Admissions.			Noneffective.					
		Total.	Hospital.	Deaths.	Total.	Hospital.	Admissions.	Deaths.	Noneffective.	
January	5,003	91.35	81.75	.18	36.66	33.53	72.56	.18	28.47	Malarial, 118; acute bronchitis, 32; beriberi, 23; dengue, 22.
February	5,198	67.72	50.02	.18	33.11	29.65	49.64	.18	25.14	Malarial, 86; acute bronchitis, 24; constipation, 19.
March	5,152	85.79	74.72	.18	35.06	32.92	66.96	.18	25.77	Malarial, 145; constipation, 24; acute bronchitis, 13.
April	5,437	70.44	62.90	.73	27.92	25.99	55.73	.73	22.08	Malarial, 94; constipation, 28; diarrhea, 19; abscesses, 17.
May	5,194	61.61	57.56	.18	24.51	23.22	45.63	.....	16.74	Malarial, 57; constipation, 25; diarrhea, 23; acute bronchitis, 21.
June	5,217	66.70	61.72	.37	23.93	22.73	54.44	.37	16.39	Malarial, 99; constipation, 25; diarrhea, 18; acute bronchitis, 16.
July	5,175	73.82	69.76	.19	23.50	22.66	54.30	.19	15.13	Malarial, 118; constipation, 17; diarrhea, 17.
August	5,065	74.43	65.94	.19	22.68	21.40	58.24	.19	15.72	Malarial, 99; constipation, 27; dyspepsia, 14.
September	5,019	60.97	54.99	.39	19.56	18.57	48.22	.20	13.44	Malarial, 75; constipation, 29.
October	4,985	75.82	67.40	.61	21.79	20.31	60.18	.40	15.08	Malarial, 114; constipation, 20; dengue, 14.
November	4,954	67.42	55.51	.20	22.13	20.34	55.91	.20	16.06	Malarial, 105; dengue, 27; constipation, 23.
December	4,719	81.16	70.56	.98	20.89	18.48	63.57	.78	14.57	Malarial, 130; constipation, 30; acute bronchitis, 16.
Total	5,093	876.10	772.04	4.34	26.01	24.19	684.27	3.58	18.73	Malarial, 1,240; constipation, 286; acute bronchitis, 173; diarrhea, 152; abscesses, 123; furuncles 112.

Excluding injuries, venereal diseases, alcoholism, and vaccinia, over which causes of admission the seasons have little or no influence, the highest admission rate is in January and the lowest in May; the highest constant noneffective rate in January and the lowest in September. The highest rate for malarial fevers was in March; for American troops it was also in March.

RECRUITING.

The following is from General Order No. 1, Headquarters Philippines Division, Manila, P. I., January 1, 1910:

The physical examination of recruits for the Philippine Scouts will be conducted in accordance with the authorized manual for the examination of recruits, except as hereinafter specified. It will include examination for filarial disease, and any applicant afflicted therewith will be rejected.

No recruit for the scouts will be accepted for enlistment who is under 59 inches in height, or 100 pounds in weight.

The following table will be used in determining the minimum allowable weight and chest measurements relative to height:

Table of physical proportions for height, weight, and chest measurements.

Height.		Weight.	Chest measurement (at expiration).
Feet.	Inches.		
		Pounds.	*Inches.*
4 11/12	59	100	28½
5	60	101	28¾
5 1/12	61	102	29
5 2/12	62	103	29¼
5 3/12	63	105	29½
5 4/12	64	107	29¾
5 5/12	65	110	30
5 6/12	66	113	30¼
5 7/12	67	118	30½
5 8/12	68	124	30¾
5 9/12	69	127	31
5 10/12	70	130	31¼

Chest measurement at expiration should be taken under conditions of normal respiratory effort. Chest mobility and measurement at inspiration will be taken, but will not be used as data for rejection of a candidate for enlistment, unless they are such as to indicate abnormality or pathological conditions.

In the case of an especially desirable applicant who is active, has firm muscles, and is evidently vigorous and healthy, who varies from the established standard, special authority for the enlistment may be requested from these headquarters.

The results of the examinations of applicants for enlistment in the Philippine Scouts are given in the following table and are of interest as showing the anthropometrical characteristics of the Filipino races. The proportion of recruits accepted to those examined was higher in 1910 than in 1909, being 97.6 per cent as compared with 88.5. The total number examined in 1910 was 1,962 as compared with 767 for 1909.

TABLE No. 48.—*Examination of Filipino applicants for enlistment, year 1910.*

	Number.	Ratio per 1,000 examined.
Examined by medical officers	1,962	1,000.00
Accepted by medical officers	1,916	976.55
By first enlistment	784	399.59
Other enlistments	1,132	576.96
Rejected by medical officers	40	20.39
Declined	6	3.06

TABLE No. 49.—*Filipino recruits (accepted).*

	Number.	Ratio.		Number.	Ratio.
18 years and under	24	12.53	31 years	74	38.62
19 years	19	9.92	32 years	45	23.49
20 years	21	10.96	33 years	32	16.70
21 years	315	164.41	34 years	33	17.22
22 years	158	82.46	35 years	21	10.96
23 years	89	46.45	36 years	14	7.31
24 years	191	99.69	37 years	18	9.39
25 years	126	65.76	38 years	10	5.22
26 years	95	49.58	39 years	10	5.22
27 years	189	98.64	40 years and over	19	9.92
28 years	149	77.78			
29 years	132	68.89	Total	1,916	1,000.00
30 years	132	68.89			

Forty-nine and two-tenths per cent were 25 years of age or under. Table No. 50 shows the height of recruits and the relation of height to age.

TABLE No. 50.—*Filipino recruits—relation of height to age.*

ABSOLUTE NUMBER.

Heights.	Age.									Total.
	18 years and under.	19 years.	20 years.	21 years.	22 years.	23 years.	24 years.	25 years.	26 years and over.	
4 feet 11 inches							2	1	7	10
5 feet	3	1	1	18	6	3	3	2	32	69
5 feet 1 inch	1	3	2	26	10	10	22	10	95	179
5 feet 2 inches		3	1	63	34	14	34	17	131	297
5 feet 3 inches	4	3	5	68	20	18	31	22	199	370
5 feet 4 inches	8	3	5	68	38	12	39	26	170	369
5 feet 5 inches	5	3	2	39	26	12	32	16	145	280
5 feet 6 inches	3	3	2	21	13	9	18	14	102	185
5 feet 7 inches			3	4	6	8	5	11	52	89
5 feet 8 inches				5	2	1	1	4	19	32
5 feet 9 inches				1	3	1	4	2	15	26
5 feet 10 inches				2		1		1	3	7
5 feet 11 inches and over									3	3
Total	24	19	21	315	158	89	191	126	973	1,916

PROPORTIONAL NUMBERS.

4 feet 11 inches							10.47	7.94	7.19	5.22
5 feet	125.00	52.63	47.62	57.15	37.97	33.71	15.71	15.87	32.89	36.02
5 feet 1 inch	41.67	157.89	95.24	82.54	63.29	112.36	115.18	79.37	97.64	93.42
5 feet 2 inches		157.89	47.62	200.00	215.19	157.30	178.01	134.92	134.64	155.01
5 feet 3 inches	166.67	157.89	238.09	215.87	126.58	202.25	162.30	174.60	204.52	193.11
5 feet 4 inches	333.33	157.89	238.09	215.87	240.51	134.83	204.20	206.35	174.72	192.59
5 feet 5 inches	208.33	157.89	95.24	123.81	164.56	134.83	167.54	126.98	149.02	146.14
5 feet 6 inches	125.00	157.89	95.24	66.67	82.28	101.12	94.24	111.11	104.83	96.56
5 feet 7 inches			142.86	12.70	37.97	89.89	26.18	87.30	53.44	46.45
5 feet 8 inches				15.87	12.60	11.24	5.24	31.75	19.53	16.70
5 feet 9 inches				3.17	18.99	11.24	20.94	15.87	15.42	13.57
5 feet 10 inches				6.35		11.24		7.94	3.08	3.65
5 feet 11 inches and over									3.08	1.57
Total	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00

Forty-eight and three-tenths per cent of all recruits were 5 feet 3 inches or less, which is below the minimum standard for American soldiers.

Table No. 51 exhibits the weight of Filipino recruits and the relation of weight to age.

TABLE No. 51.—*Filipino recruits—relation of weight to age.*

ABSOLUTE NUMBERS.

Weights.	Age. 18 years and under.	19 years.	20 years.	21 years.	22 years.	23 years.	24 years.	25 years.	26 years and over.	Total.
99 pounds and under	.....	.....	.....	1	.....	1	2	1	10	15
100 to 104 pounds	5	2	1	28	9	6	8	9	59	127
105 to 109 pounds	3	4	1	58	22	12	19	17	112	248
110 to 114 pounds	5	3	5	77	33	15	29	24	164	355
115 to 119 pounds	6	7	6	53	33	18	30	19	172	344
120 to 124 pounds	3	1	3	49	22	13	33	18	144	286
125 to 129 pounds	1	2	1	19	15	9	40	19	122	228
130 to 134 pounds	1	.....	2	16	9	8	19	12	80	147
135 to 139 pounds	.....	.....	2	8	11	3	10	4	56	94
140 to 144 pounds	.....	.....	.....	4	1	4	.....	2	20	31
145 to 149 pounds	.....	.....	.....	2	2	.....	1	1	20	26
150 to 154 pounds	.....	.....	.....	.....	.....	.....	.....	.....	7	7
155 to 159 pounds	.....	.....	.....	.....	.....	.....	.....	.....	3	3
160 pounds and over	.....	.....	.....	.....	1	.....	.....	.....	4	5
Total	24	19	21	315	158	89	191	126	973	1,916

PROPORTIONAL NUMBERS.

99 pounds and under	.....	.....	.....	3.17	.....	11.24	10.47	7.94	10.28	7.83
100 to 104 pounds	208.33	105.26	47.62	88.89	56.96	67.42	41.88	71.43	60.64	66.28
105 to 109 pounds	125.00	210.53	47.62	184.13	139.24	134.83	99.48	134.92	115.11	129.44
110 to 114 pounds	208.33	157.89	238.09	244.44	208.85	168.54	151.83	190.48	168.55	185.28
115 to 119 pounds	250.00	368.42	285.71	168.25	208.85	202.25	157.07	150.79	176.77	179.54
120 to 124 pounds	125.00	52.63	142.86	155.56	139.24	146.07	172.77	142.86	148.00	149.27
125 to 129 pounds	41.67	105.26	47.62	60.32	94.94	101.12	209.42	150.79	125.39	119.00
130 to 134 pounds	41.67	.....	95.24	50.79	56.96	89.89	99.48	95.24	82.22	76.72
135 to 139 pounds	.....	.....	95.24	25.40	69.62	33.71	52.36	31.75	57.56	49.06
140 to 144 pounds	.....	.....	.....	12.70	6.33	44.94	.....	15.87	20.55	16.18
145 to 149 pounds	.....	.....	.....	6.35	12.66	.....	5.24	7.94	20.55	13.57
150 to 154 pounds	.....	.....	.....	.....	.....	.....	.....	.....	7.19	3.65
155 to 159 pounds	.....	.....	.....	.....	.....	.....	.....	.....	3.08	1.57
160 pounds and over	.....	.....	.....	.....	6.33	.....	.....	.....	4.11	2.61
Total	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00

It will be observed that the weight of 83.6 per cent of all recruits is 128 pounds or under, the minimum standard for American recruits.

Table No. 52 shows the chest measurements of recruits and the relation of chest measurement to age.

TABLE No. 52.—*Filipino recruits—relation of chest measurement to age.*

ABSOLUTE NUMBERS.

Chest measurements.	Age. 18 years and under.	19 years.	20 years.	21 years.	22 years.	23 years.	24 years.	25 years.	26 years and over.	Total.
26 inches and under	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
27 inches	.....	.....	.....	1	.....	.....	.....	.....	.....	1
28 inches	.....	.....	1	6	2	1	4	1	7	22
29 inches	.....	2	.....	27	12	5	4	8	44	102
30 inches	12	4	4	88	35	17	29	21	164	374
31 inches	4	5	6	87	41	25	37	35	241	481
32 inches	4	4	7	62	31	22	62	22	222	436
33 inches	2	2	.....	27	21	14	40	22	165	293
34 inches	2	2	2	13	11	5	11	8	84	138
35 inches	.....	.....	1	3	5	.....	4	8	32	53
36 inches and over	.....	.....	.....	1	.....	.....	.....	1	14	16
Total	24	19	21	315	158	89	191	126	973	1,916

TABLE No. 52.—*Filipino recruits - relation of chest measurement to age* Continued.

PROPORTIONAL NUMBERS.

Chest measurements.	Age.									
	18 years and under.	19 years.	20 years.	21 years.	22 years.	23 years.	24 years.	25 years.	26 years and over.	Total.
26 inches and under										
27 inches				3.17						0.52
28 inches			47.62	19.05	12.66	11.24	20.94	7.94	7.19	11.48
29 inches		105.26		85.71	75.95	56.18	20.94	63.49	45.22	53.24
30 inches	500.00	210.53	190.48	279.37	221.52	191.01	151.83	166.67	168.55	195.20
31 inches	166.67	263.16	285.71	276.19	259.49	280.90	193.72	277.78	247.69	251.04
32 inches	166.67	210.53	333.33	196.83	196.20	247.19	324.61	174.60	228.16	227.56
33 inches	83.33	105.26		85.71	132.91	157.30	209.42	174.60	169.58	152.92
34 inches	83.33	105.26	95.24	41.27	69.62	56.18	57.59	63.49	86.33	72.03
35 inches			47.62	9.52	31.65		20.94	63.49	32.89	27.66
36 inches and over				3.17				7.94	14.39	8.35
Total	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00

The minimum standard chest measure for American recruits is 32 inches at expiration. Thirty-one and one-tenth per cent of all Filipino recruits have a chest measurement below this standard.

The next table, No. 53, gives the causes for rejection among the 1,962 applicants for enlistment examined by medical officers during the year.

TABLE No. 53.—*Causes of rejections of Filipino applicants for enlistment, year 1910.*

	Total.	
	Number.	Ratios per 1,000 rejected for all causes.
Heart disease	8	200.00
Defects of vision	6	150.00
Underweight	5	125.00
Venereal diseases	2	50.00
General diseases	2	50.00
Diseases of the respiratory system	2	50.00
Defects of development	2	50.00
Diseases of the eye, excluding defects of vision	1	25.00
Diseases of the ear	1	25.00
Varicocele	1	25.00
Tuberculosis	1	25.00
Defective teeth	1	25.00
Hernia	1	25.00
Diseases of the skin	1	25.00
Curvature of the spine	1	25.00
Diseases of the organs of locomotion	1	25.00
Results of injuries	1	25.00
Causes not physical	3	75.00
Total	40	1,000.00

Six were rejected for defects of vision, and five for underweight. Only two were rejected for venereal diseases.

SURGICAL OPERATIONS.

One hundred and fifty-two operations were performed upon Filipino Scouts, 148 of which were successful. There were 4 deaths, 1 each being due to acute suppurative mastoiditis; tuberculous peritonitis; general suppurative peritonitis following rupture of appendix, and malignant edema. The anesthetic used was chloroform in 18 cases; ether in 37; and local anesthetic in 60. No anesthetic was required in 37 operations.

TABLE NO. 54.—*Surgical operations performed on Filipino troops, 1910.*

Operations.	Disease or injury.	No. of cases.	Result.				Anesthetic.			
			Successful.	Partially successful.	Failure.	Died.	Chloroform.	Ether.	Local.	None.
	Eye.									
Transplantation	Pterygium	1	1						1	
Incision and drainage	Chalazion	1	1						1	
	Ear.									
Schwartz's modified cranectomy.	Mastoiditis, acute suppurative.	1				1	1			
	Nose.									
Removal, 1; removal, partial, 1.	Polypus	2	2						2	
	Abdomen.									
Appendectomy, 3; incision and drainage, 1.	Appendicitis	4	4					4		
Appendectomy and drainage	General peritonitis following rupture of appendix.	1				1			1	
Incision and drainage	Peritonitis, tuberculous	1				1			1	
Removal of spleen	Wandering spleen, with hydatid cysts right iliac region.	1	1					1		
Bassini's operation, 1; Ferguson's modified operation, 1.	Hernia, inguinal	2	2					2		
	Anus and rectum.									
Incision and drainage	Ischio-rectal abscess	3	3					2	1	
Do	Fistula in ano	11	11				5	4	2	
Dilatation and cauterization	Fissure of anus	1	1					1		
Incision, 1; excision, clamp and cautery, 2.	Hemorrhoids	3	3				1		2	
Excision	Condyloma, anal	2	2					2		
	Genito-urinary.									
High excision	Varicocele	3	3					2	1	
Jaboulay's incision, 1; tapping, 1	Hydrocele	2	2					2		
Multiple incision of tunic	Orchitis	1	1					1		
Urethrotomy, internal and external.	Organic stricture of urethra	1	1					1		
Circumcision	Balano-posthitis	2	2						2	
Do	Phimosis	1	1						1	
Do	Elongated prepuce	3	3				1	1	1	
Evulsion	Adhesions, prepuce and glands.	1	1						1	
	Skin and cellular tissue.									
Incision and drainage	Carbuncle	1	1					1		
Do	Cellulitis	2	2						2	
Do	Malignant edema	1				1	1			
Do	Abscess	55	55				2	1	23	29
	Lymphatic glands.									
Incision and curetment, 8; excision of gland, 7; incision and drainage, 2.	Adenitis, inguinal venereal	17	17				1	4	10	2
	Muscles, tendons, fasciæ, ligaments, and bursæ.									
Excision	Bursitis	1	1						1	
	Bones.									
Enlargement of wound and drainage.	Fracture, compound comminuted of humerus.	1	1					1		
Incision, curetment, and wiring of bones.	Fracture, compound, both bones, leg (old).	1	1					1		
Reduction and wiring of fragments.	Fracture of leg	1	1				1			
Osteotomy, and resection of bone.	Old fracture, bone not stated.	1	1					1		
Removal of carious bone and curetment.	Necrosis of fibula	1	1					1		

TABLE No. 54.—*Surgical operations performed on Filipino troops, 1910*—Continued.

Operations.	Disease or injury.	No. of cases.	Result.				Anesthetic.			
			Successful.	Partially successful.	Failure.	Died.	Chlorofor	Ether.	Local.	None.
	Joints.									
Excision of exostosis	Hallux valgus	1	1					1		
	Amputations.									
Amputation	Crushed fingers	1	1				1			
Do	Dry gangrene index finger	1	1					1		
	Tumors.									
Excision	Cyst	1	1				1			
Do	Fibroma	1	1						1	
Do	Sebaceous cyst	7	7						5	2
	Miscellaneous.									
Incision and drainage	Contused wound of tibia	1	1					1		
Suturing, 4; ligation of severed vessels and drainage, 1.	Lacerated wound	5	5				2	1		2
Incision and drainage	Punctured wound	3	3						1	2
Removal of foreign body and drainage.	Perforating wound of axilla	1	1				1			
Total cases		152	148			4	18	37	60	37

PREVALENCE OF DISEASES, BY RACES, IN THE PHILIPPINES.

In making this comparison it is to be borne in mind that the native troops were serving in their own country under conditions natural to them, but inimical to our troops, and that American soldiers excused from any portion of their military duty, no matter how trivial the cause, were placed on sick report, while this was not the case with the Filipino Scouts.

The admissions and constant noneffective rates were much lower for the Filipino than for American troops serving in the Philippines, the admission rate for American troops being 1,242.65 and for Filipino 876.10. The death and discharge rates for the Filipino troops were also lower than for American, the death rate for the former being 4.34 and for the latter 5.19, while the discharge rate for the former was 6.79 and for the latter 10.14.

TABLE No. 55.—*Important diseases by races, Philippine Islands.*

Diseases.	Admission rates.	
	American troops, white, only.	Filipino troops.
Venereal	275.64	62.05
Dengue	82.84	18.06
Diarrhea and enteritis	74.86	29.84
Furunculosis	39.10	21.99
Dyspepsia	30.63	16.10
Alcoholism	28.26	.39
Muscular rheumatism and myalgia	19.79	14.33
Dysentery	19.39	10.01
Tonsillitis	17.84	2.95
Hemorrhoids	10.34	.59
Articular rheumatism, acute and chronic	8.15	4.12
Appendicitis	7.98	2.36
Tuberculosis	5.46	3.34
Pneumonia	.73	.59
Cholera	.24	.20
Malaria	86.34	243.47
Bronchitis, acute and chronic	21.59	36.33
Dhobie itch	12.54	22.38
Conjunctivitis	4.97	18.46
Intestinal parasites	4.97	18.06
Beriberi		11.00
Influenza	1.22	2.95

SPECIAL DISEASES, PHILIPPINE SCOUTS.

TYPHOID FEVER.

Twelve cases of typhoid fever occurred among the native troops. Eleven of these were at Camp Gregg and 1 at Cotabato. In all there were 15 cases at Camp Gregg during the year of 1910 and the latter part of 1909. The occurrence was as follows: November 26, 1909, private, sanitary, Philippine Scouts; December 5, 1909, 11th Company, 1 case; December 29, 1909, 11th Company, 1 case; March 3–8, 1910, 11th Company, 7 cases; March 4, 1910, 8th Company, 1 case; March 5, 1910, 8th Company, 1 case; March 6, 1910, 10th Company, 1 case; April 15, 1910, 7th Company, 1 case.

It was the opinion of the post surgeon, Lieut. E. F. Huber, that the first 3 and the last case must have contracted their infection from the bath water or in the pueblo. He states that the scouts spend most of their time with the natives in the neighboring town and where there is no doubt in his opinion that typhoid is almost constantly present. Several cases in the families of scouts have been called to his attention. He says :

> The origin of the other 10 cases is not so clear. On February 16, 1910, the battalion left the post for the maneuver camp at Dinalupijan, Bataan. At one time, about February 22, 1910, the Eleventh Company was separated from the Battalion, and not having camp facilities the men probably drank unboiled water. The battalion returned to Camp Gregg, February 27; 7 Eleventh Company men were admitted to hospital from March 3 to 8, inclusive, probably having received their infection at the time mentioned above. The other three cases diagnosed typhoid fever were admitted March 4, 5, and 6, respectively; 2 from the Eighth and 1 from the Tenth Company. Two of these 3 also had malarial fever, estivoautumnal, and although no history could be obtained the positive Widal might have been due to previous infection.

MALARIAL FEVERS.

The admission rate of all fevers of this class was 243.47 as compared with 203.95 for 1909, and 236.97 for 1908. The cause that lessens the venereal rate among native troops operates in their case to increase the incidence of malaria. The majority of them, being married, sleep to a greater or less extent outside of the barracks, and hence without their mosquito bar.

VENEREAL DISEASES.

Among Filipino troops veneral diseases constitute the second cause of admission; the good showing, as shown below, being entirely due to the fact that the majority of the native troops are married. This class of diseases constitute about one-thirteenth of the total number of admissions for disease for these troops. There were 265 admissions for gonorrhea and sequela, 29 for venereal ulcer, and 22 for syphilis and sequela. The rate was 62.05 as compared with 48.61 for 1909.

SMALLPOX.

Only 1 case of smallpox occurred among the native troops. This case recovered.

CHOLERA.

Only 1 case of cholera occurred among the scouts. This case was at Camp Gregg, P. I., and recovered.

TUBERCULOSIS.

Seventeen cases of tuberculosis occurred among the native troops, a ratio of 3.34 per 1,000. There were 5 deaths and 15 discharges for disability.

DYSENTERIES.

The admission rate was 10.01 as compared with 5.90 for 1909.

DENGUE.

The admission rate was 18.06 as compared with 12.29 for 1909.

DIARRHEA AND ENTERITIS.

The admission rate was 29.84 as compared with 38.74 for 1909.

BERIBERI.

The admission rate was 11.00 as compared with 103.93 for 1909. The noneffective rate was 1.66 as compared with 11.96 for 1909. The death and discharge rates were 0.38 and 0.38 as compared with 2.17 and 5.96 for 1909.

The Tropical Board (then consisting of Capts. Phalen and Kilbourne) on September 30, 1909, recommended that the following changes be made in the scout ration:

(1) That the daily amount of rice used per man be limited to 16 ounces instead of the 20 ounces formerly allowed.

(2) That Filipino No. 2 rice (an undermilled article) be substituted for choice Saigon rice (highly milled).

(3) That 1.6 ounces of beans be added to the ration in place of the 4 ounces of rice not used.

(4) That the issue be authorized of canned tomatoes in lieu of an equal quantity of potatoes, but not to exceed 20 per cent of the total issue.

(5) That onions be issued on the same terms as tomatoes instead of allowing them to be substituted for the entire quantity of potatoes.

(6) That no savings be permitted upon the ration of fresh beef and potatoes or their substitutive articles.

As a result of these recommendations the following letter was issued by the division commander:

HEADQUARTERS PHILIPPINES DIVISION,
Manila, November 3, 1909.

The COMMANDING GENERAL, DEPARTMENT OF LUZON, *Manila.*

SIR: The division commander directs that the attention of all scout battalion and company commanders be called to the directions of the Secretary of War, that with the exception of the meat component of the ration, scouts will be rationed as largely as possible on native food products; to the recommendation of the Board for the Study of Tropical Diseases, that the amount of rice be reduced from 20 to 16 ounces per ration, and that beans to the extent of 1.6 ounces per ration be used in lieu of rice; to Army Regulations 1262, under which native food products not procurable locally can be obtained from the subsistence department as exceptional articles.

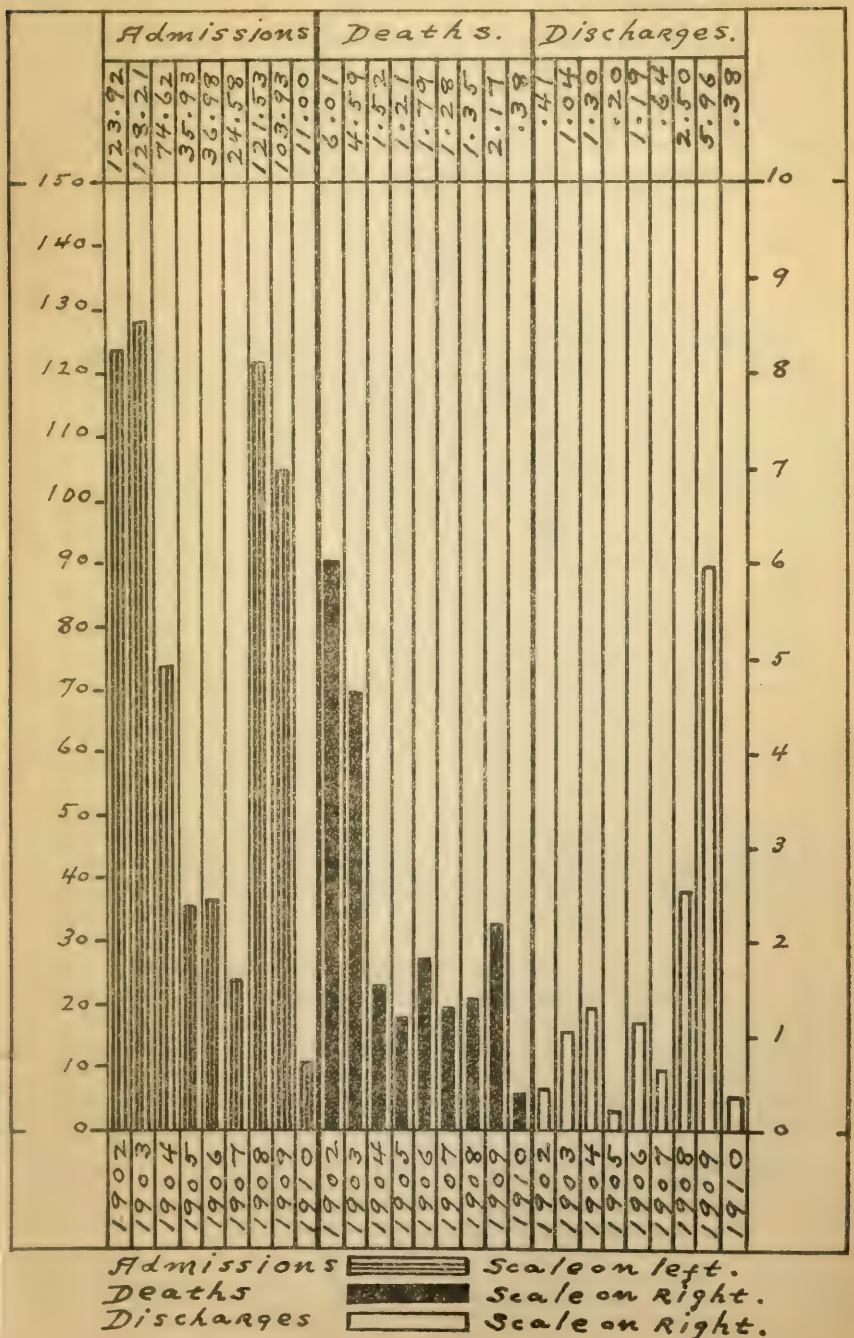
In view of the above, company commanders should not draw rice to exceed 16 ounces per ration. Savings should be made as largely as possible on potatoes, onions, and coffee; and native products, such as camotes, mongos, squash, ginger root, etc., be purchased.

Very respectfully, J. T. KERR, *Adjutant General.*

As early as the spring of 1909, the members of the board had been conducting a propaganda of education among the scout officers in regard to the prevention of beriberi by the measures as above outlined. Toward the end of March, 1910, General Order No. 24, War Department, 1910, reached the islands. This order reduced the amount of rice issued from 20 to 16 ounces and specified the Filipino No. 2 rice (a red, undermilled rice). In lieu of the 4 ounces of rice, 4 ounces of mongos (*Phaseolus radiatus* Linn.), closely allied to the bean, were added. The camote, a native sweet potato, was to be issued in lieu of the Irish potato. In addition to these changes, 0.5 ounce of ginger root was added. Upon receipt of this order the subsistence department at once began the purchase of mongos and camotes. Owing, however, to the large quantity of polished rice on hand, authority was obtained from the War Department to continue its issue until August 1, 1910. After this time the rice as specified was issued.

For many reasons the new scout ration caused dissatisfaction among the troops and in the subsistence department. The Filipino No. 2 rice, in addition to being undermilled, contained many unhusked kernels and much broken grain and dirt, and, furthermore, was thought to become infested with worms and insects more readily than did polished rice. The subsistence department claimed that the camotes did not keep well, and neither they nor the mongos could always be obtained in sufficient quantities in the island market. On November 7, 1910, on the recommendation of the general commanding the Division of the Philippines, a cablegram was sent from Wash-

CHART 8.—*Showing the relative admission, death, and discharge ratios, per thousand of mean strength, by years since 1902, for beriberi among Filipino scouts.*



ington revoking the order of February, 1910, and returning to the old scout ration. This retrograde step was energetically opposed by this office, and in May of the present year an order was issued again changing the ration to conform with the recommendation of the board. This order is practically the same as the one of February, 1910, except that it specifies a good grade of undermilled rice instead of the Filipino No. 2. It has been found at Culion and other places that the undermilled rice of the yellowish-white variety is perfectly acceptable to the natives, while the undermilled red rice is not. The following tables and chart show the very marked decrease in the number of cases of beriberi:

TABLE A.—*Beriberi statistics for Philippine Scouts, calendar years 1902–1910.*[1]

Calendar years.	Mean strength (Surgeon General's office).	Admissions.		Deaths.		Discharges for disability.	
		Number.	Rate per 1,000.	Number.	Rate per 1,000.	Number.	Rate per 1,000.
1902	4,826	598	123.92	29	6.01	2	0.41
1903	4,789	614	128.21	22	4.59	5	1.04
1904	4,610	334	74.62	7	1.52	6	1.30
1905	4,732	170	35.93	6	1.21	1	.02
1906	4,759	176	36.98	9	1.79	6	1.19
1907	4,679	115	24.58	6	1.28	3	.64
1908	5,085	618	121.54	7	1.35	13	2.50
1909	5,369	558	103.93	12	2.17	33	5.96
1910	5,422	49	9.02	2	.36	3	.55

TABLE B.—*Admissions for beriberi, by months, calendar years 1908–1910.*[1]

Years.	Jan.	Feb.	Mar.	Apr.	May	June	July.	Aug.	Sept	Oct.	Nov.	Dec.	Total.
1908	14	34	102	23	51	33	55	39	63	59	88	63	624
1909	138	89	96	88	38	24	28	36	7	27	22	11	604
1910	19	8	12	3	4	1	.....	2	.....	.....	.....	.....	49

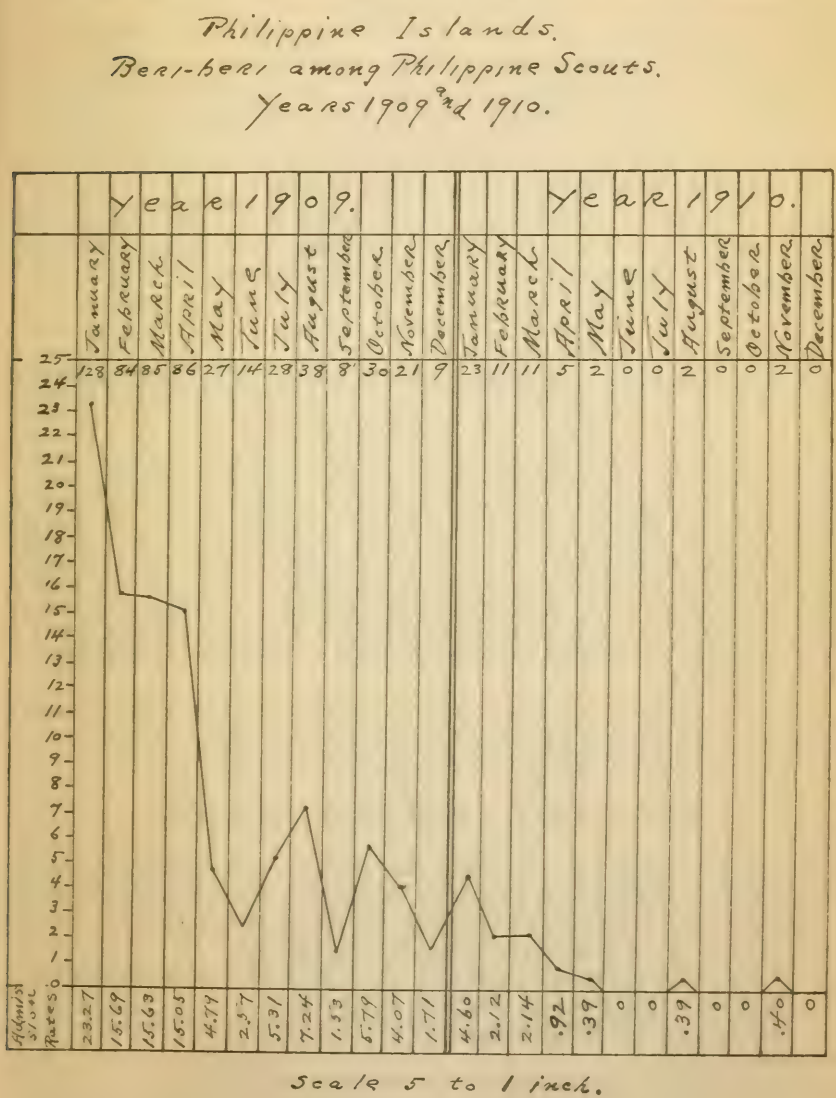
[1] Table A, except for the year 1910, is taken from the reports of the Surgeon General of the Army. Table B is compiled from records in the office of the chief surgeon, Philippines Division. The discrepancy between the total admissions in the two tables is due to the fact that in the chief surgeon's record a new admission is recorded if a patient is transferred from one hospital to another, whereas in the Surgeon General's report one admission is recorded for such a case. The admissions (49) for 1910 should really be compared with the chief surgeon's figures for 1908 and 1909 (624 and 604, respectively). This would make the showing even more favorable than is given in the text. Fractionally it means that the admissions for 1910 were less than one-twelfth of the average for the two preceding years.

The board concludes that the important beriberi-preventing factor in the new Filipino ration prescribed by General Order No. 24 was neither mongo, nor camote, nor ginger root, nor undermilled rice, per se, but was the reduction in the quantity of rice consumed and the substitution, in lieu of the rice taken away, of a legumen, which in this case was mongos, but which might equally well have been beans, as recommended by the board on September 20, 1910.

It might be argued by those favoring the nitrogen-starvation theory that the decrease in beriberi in 1910 was due to an increase in the amount of meat consumed by the scouts as a result of the letter of the division commander, which directed making savings as largely as possible on potatoes, onions, and coffee. We do not think that an increased meat consumption has been an important factor for the following reasons: (*a*) The scout did not as a rule make large savings on his meat component, and (*b*) the meat allowance is so great (12 ounces) that the scouts could make considerable savings thereon and still have an amount larger than is furnished the soldier of many of the European armies, the French allowing 10.6 ounces of meat, the Russian 7.75

CHART T.—*Beriberi among Philippine Scouts, years 1909 and 1910.*

(Two cases in March and one case in May, 1909, among American troops, not included.)


Philippine Islands.
Beri-beri among Philippine Scouts.
Years 1909 and 1910.
Year 1909.
January February March April May June July August September October November December
128 84 85 86 27 14 28 38 8 30 21 9
Year 1910.
January February March April May June July August September October November December
23 11 11 5 2 0 0 2 0 0 2 0
Admission Strength Rates.
23.27 15.69 15.63 15.05 4.74 2.57 5.31 7.24 1.53 5.79 4.07 1.71 4.60 2.12 2.14 .92 .39 0 0 .39 0 0 .40 0
Scale 5 to 1 inch.

ounces, and the Austrian 6.7 ounces. In considering these figures it should be borne in mind that the average weight of a Filipino is about four-fifths that of a European or American.

That the reduction in beriberi among the scouts in 1910 is not coincident with a corresponding lessening of beriberi cases in the general population of the Philippines may be inferred from the following table of death rates which were furnished us through the courtesy of the officials of the bureau of health:

TABLE C.

Fiscal years.	Deaths from beriberi.		
	In Manila.	In 22 Provinces. (Population about 5,000,000.)	Total.
1906	406	2,228	2,634
1907	403	1,377	1,777
1908	492	1,180	1,672
1909	924	1,765	2,689
1910	1,002	1,395	2,397
1911 (first half)	911	(1)	.....

[1] Not obtainable.

The real factors in the eradication of beriberi from the scout organizations have been a reduction in the amount of rice consumed and the addition of a legumen. The result was accomplished without the use of undermilled rice. The board still favors the polished rice theory of beriberi production as being the one best supported at the present time by experimental evidence and practical experience in many localities. It is considered that the good results with the scouts help to support the theory. The board feels that the adoption of an undermilled grain for the Philippine Scouts will allow rice to be used more freely by these soldiers with less risk of beriberi than would be the case if the polished article was supplied to them. This is a very important point, because, as a result of racial taste and custom, a certain number of natives will attempt to subsist mainly on rice no matter how extensive, varied, or well balanced may be the diet supplied to them by the Subsistence Department. If polished rice is being issued to the troops these men will be the first to develop beriberi whenever for any reason a period of unfavorable dietetic administration supervenes.

Since rice is the natural and economical diet for the oriental native it follows that the free use of undermilled rice is likely to work in the direction of both efficiency and economy.

SANITATION, PHILIPPINE ISLANDS.

During the early part of this year a letter was addressed to the chief surgeon, Philippines Division, requesting that the information in regard to the following sanitary measures be obtained from all the posts in that division and furnished to this office:

1. Water supply; source, method of purification, and distribution.
2. Sewerage systems and disposal of wastes.
3. Measures instituted to diminish the frequency of venereal infection and results.
4. Prophylactic measures against malaria and results.
5. Screening of barracks, hospitals, and quarters (detailed reports).
6. Barracks, hospitals, and quarters; materials used in construction, general plan of construction, and the allowance of cubic air space.

7. Proximity to native villages and any noticeable effect upon the health of the command resulting therefrom.

8. Any official report that may be furnished either in regard to diseases prevalent among the troops or among the natives in the vicinity.

In reply to this letter detailed reports have been furnished from all the garrisoned posts in the Philippine Islands and much valuable information obtained.

1. WATER SUPPLY.

A few of the posts are now supplied with artesian wells from which it is considered safe to use the water for drinking and cooking without sterilization. At a vast majority of the larger posts, however, the water for drinking and cooking is distilled and stored in a tank. From this tank it is drawn daily into a water tank wagon and delivered to the various barracks and quarters in galvanized water cans. The storage tank, the water tank wagons, and the water cans are steamed out at stated intervals. In accordance with a division order a bacteriological examination is made twice monthly. On account of the danger that water may be contaminated during the delivery, most of the post surgeons recommend that all water for drinking purposes be boiled. The table on next page is a detailed report of the water used at the posts garrisoned by two or more companies.

Post.	Source.		Purification.		Distribution.	
	Drinking and cooking.	Bathing, etc.	Drinking and cooking.	Bathing, etc.	Drinking and cooking.	Bathing, etc.
Augur Barracks, Jolo	Surface (creek); impounded.	Same	Distilled	None	Wagon and cans	Piped.
Camp Avery	Deep well	do	Boiled	do	Piped	Do.
Camp Connell	Rain water; collected in large reservoir.	Cisterns	Distilled	do	Wagon and cans	Cisterns at hand.
Camp Downes	Surface; impounded	Same	do	do	do	Piped.
Camp Eldridge	Mountain streams	do	Boiled	do	Piped..... cans	Do.
Camp Gregg	Agno River	do	Distilled	do	Wagon and cans	Do.
Camp John Hay	Spring	do	do	do	Cans filled from storage tank.	Do.
Camp Jossman	Springs	Shallow wells	do	do	Wagon and cans	Do.
Camp Keithley	Lake Lanao	Spring and Lake Lanao.	do	do	do	Do.
Camp McGrath	Springs; impounded	Same	do	do	do	Do.
Camp Overton	Numungan River	do	do	do	do	Do.
Camp Stotsenburg[1]	Deep-driven well	do	None	do	Piped	Do.
Cotabato	Rio Grande River	do	Roughly filtered and distilled.	Water that cooled distilling pipes.	Cans filled and delivered	Piped partially and cans partially.
Fort Mills	Deep well	do	Boiled	None	Piped	Piped.
Fort McKinley	Deep artesian wells	do	None	do	do	Do.
Fort Wint	Deep and shallow wells	do	Distilled	do	Wagon and cans	Do.
Fort San Pedro	Surface; impounded	do	do	do	do	Do.
Ludlow Barracks	Springs	Natuan River	do	do	do	Do.
Cuartel de Espana	Manila supply; surface; impounded.	Same	do	do	do	Do.
Pettit Barracks	Tamaga River	do	Roughly filtered and distilled.	Water that cooled distilling pipes.	do	Not stated.
Puerto Princesa	Cisterns	do	Boiled	None	Cans filled and delivered	Same.
Regan Barracks	Spring	do	Distilled	do	Wagon and cans	Piped.
Torrey Barracks	do	do	do	do	do	Do.
Warwick Barracks	Well; depth, 90 feet.	Well; depth, 12 feet.	do	Boiled	do	Do.
Zamboanga	Tamaga River	Same	Roughly filtered and distilled.	Water that cooled distilling pipes.	do	Not Stated.

[1] Another supply from the Bambam River is distributed by pipes for watering animals, lawns, fires, etc.

2. SEWERAGE SYSTEMS AND DISPOSAL OF WASTES.

At a few of the larger posts there is a water carriage system of sewage disposal. At most of the posts, however, there is as yet no modern system. Dry earth closets are used for the human excreta. The galvanized iron pans are emptied and cleansed once or twice daily by native scavengers. When these closets have fly-proof boxes and are properly cared for, and if a sufficient amount of dry earth is used, the system is a very satisfactory one, in the absence of a water carriage system. Garbage and kitchen slops are collected and conveyed to some place at a distance from the post where they are dumped into the sea, or otherwise disposed of. All sweepings are collected and carted away.

Modern water carriage sewerage systems are in operation at the following posts: Camp Eldridge, Camp John Hay, Camp McKinley, Camp McGrath, Ludlow Barracks, and Warwick Barracks.

All of the posts situated in the city of Manila use the city system. The sewer system at Camp Eldridge is not quite complete and is supplemented by the measures outlined above. The two companies at Warwick Barracks stationed at the target range outside of the city have no sewer system.

3. MEASURES INSTITUTED TO DIMINISH THE FREQUENCY OF VENEREAL DISEASES.

This question is discussed under the head of the prevalence of special diseases in the Philippines, American troops.

4. PROPHYLACTIC MEASURES AGAINST MALARIA.

In general terms these measures are:

(1) Systematic destruction of breeding places of mosquitoes, (*a*) by drainage, (*b*) by oiling all pools, (*c*) by keeping grass and bushes cut and shrubbery well trimmed.

(2) Enforced use of the mosquito bars.

(3) Records are kept of all malarial cases and quinine is administered at stated intervals to these cases for several months after their discharge from hospital.

(4) As a rule, cases of malarial fevers in hospital are kept under mosquito bars until they are convalescent.

(5) At some posts prophylactic doses of quinine are administered periodically to the entire command.

5. SCREENING OF BARRACKS, HOSPITALS, AND QUARTERS.

Owing to the open structure of the houses and the great expense incident to screening such structures, as well as to the lack of appropriation, very little has been accomplished in the matter of screening. It is a matter of great sanitary importance that all the quarters, barracks, and the hospitals especially, should be thoroughly screened at posts where malarial infections occur. The following is a statement of the screening that has been done:

Camp Eldridge.—Barracks and officers' quarters are screened throughout. The dining room and kitchen of the hospital are screened.

Camp McKinley.—The hospital buildings, officers' and noncommissioned officers' quarters are completely screened. The kitchens and dining rooms of all the barracks are screened.

Camp John Hay.—The kitchens and dining rooms of the hospital and barracks are screened.

Camp Gregg.—All the buildings are completely screened.

Ludlow Barracks.—Five sets of officers' and one noncommissioned officers' quarters are screened throughout: one bedroom in three other officers' quarters; the isolation ward in the hospital and a cage sufficiently large to accommodate two patients. The surgeon stated in his report on March 20, 1911, that the screening of all the officers' quarters would soon be completed.

Pettit Barracks.—One room in each set of quarters is screened; in the hospital, the laboratory, operating room, kitchen and dining rooms are screened.

Cuartel de Espana.—The kitchen and dining room are screened against flies.

Warwick Barracks.—The kitchens for band and the companies stationed in Cebu are imperfectly screened.

Fort Wint.—Four sets of officers' quarters are imperfectly screened.

Camp McGrath.—A portion of the porches of one or two sets of officers' quarters are imperfectly screened. There is no other screening.

6. BARRACKS, HOSPITALS, AND QUARTERS.

The materials of which these buildings are constructed are in general terms nipa, stone and cement, and Oregon pine supplemented by native lumber. In the posts of temporary character, especially in the first years of occupation, temporary structures were built, nipa being used for the sides and roof and wood for the floors. In the old Spanish posts the stone and cement quarters and barracks have been in many instances remodeled and additions made to them. The wooden structures are roofed with galvanized iron, and in a general way are described as follows:

> The barracks, hospital, and quarters are constructed of rough pine boards, the floors of tongue and grooved flooring lumber, the wall partitions of the same; the general plans differ somewhat according to the rank of the occupant; the quarters of the lieutenants resemble a one story cottage, porched around the three sides, containing three living rooms and a bath, kitchen, and a room for the servants; those occupied by captains and field officers have two additional sleeping rooms, bath, kitchen, and two rooms for servants.
>
> The construction of all the quarters, barracks, and hospital, with one or two exceptions, is without ceilings and the partitions only extend to the eaves of the house, giving an abundance of air space.
>
> The entire upper portion of the above buildings is open to the ventilator, which extends the entire length of the houses. None of these buildings have glass in the windows, which are all double, and it is the usual practice to leave everything wide open during the night.

All of the buildings are very open in construction and well ventilated. The cubic air space is reported as sufficient at all the posts.

7. EFFECTS UPON THE HEALTH OF THE COMMAND DUE TO THE PROXIMITY OF NATIVE VILLAGES.

Every post has its neighboring village, and in some instances the posts are built in the native town. Reference has been made in another place to the frequent occurrence of cholera epidemics in

these villages and the dangers therefrom of infection in the post. The incidence of malarial fevers, alcoholism, dysenteries, and venereal diseases is certainly increased by the proximity of these towns.

TYPHOONS.

A severe typhoon swept over the islands of Cebu, Leyte, and Samar on October 31 and November 1, 1910, destroying many of the buildings at Camp Hayt and severely damaging and partially destroying those at Camps Bumpus, Downs, James, Tagabrian, and Warwick Barracks. There were no casualties nor severe accidents reported among the troops, and only a few cases were admitted to sick report for minor injuries.

DISEASES PREVALENT AMONG THE NATIVES AND NATIVE TROOPS.

Capt. William A. Powell, surgeon at Camp Wilhelm from August 15, 1908, to December 15, 1910, reports that beriberi and malarial fevers are quite prevalent in that vicinity, but that only a few sporadic cases of typhoid fever have been observed. He attended 3 cases of hemoglobinuric fever, 1 of which resulted fatally. Eight cases of paragonimus Westermani were seen, 7 of which were pulmonary and 1 intestinal. All of these cases except 1 had recently lived in Samar. He also reports 26 cases of yaws, 1 of elephantiasis, 21 of leprosy, 2 of gondou, 1 of ainhum, and 5 of Bilharzias disease (urinary). The following tables are from his report, and show the results of the examination of stools of Philippine Scouts and of civilians:

Intestinal parasites.

SCOUTS.

Examinations and infections.	Ilocano.		Cagayan.		Bicol.		Total.
	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	
Cases examined	225		86		21		332
Positive	168	74.6	63	73.1	15	71.4	
Negative	57	25.4	23	26.9	6	28.6	
Cases infected with—							
Hookworm	99	44.0	40	47.0	10	47.6	
Ascaris	107	47.5	55	63.9	12	57.1	
Trichiasis	91	40.4	39	45.3	7	33.3	
Oxyuris	6	2.6	3	3.4	1	4.7	
Hymenolepis	1	.4			1	4.7	
Tænia	8	3.5	2	2.3	3	14.2	

CIVILIANS (NATIVES ONLY INCLUDED).

Examinations and infections.	Male.		Female.		Children.		Total.
	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	
Cases examined	40		32		18		90
Positive	31	77.5	26	81.2	15	83.3	
Negative	9	22.5	6	18.8	3	16.7	
Cases infected with—							
Hookworm	22	55.0	18	56.2	6	33.3	
Ascaris	26	65.0	25	78.1	14	77.7	
Trichuris	23	57.0	19	59.3	8	44.4	
Oxyuris	2	5.0	1	31.2	11	61.1	
Hymenolepis							
Tænia	4	10.0	2	6.3	3	16.6	

Capt. Robert C. Loving, surgeon at Camp Connell, Samar, reports that paragonimus infections and cases of elephantiasis are common in that vicinity and that tuberculosis is alarmingly prevalent. He also reports one case of bubonic plague in a native, the diagnosis of which was confirmed at autopsy both anatomically and bacteriologically.

Maj. Thos. J. Kirkpatrick, surgeon at Camp Jossman, reports that dysentery, both amœbic and bacillary, malaria, mumps, and whooping cough are prevalent among the natives in that vicinity. A few cases of yaws have been observed.

Capt. J. D. Heysinger, surgeon at Camp Downes, Leyte, states that dysentery was epidemic in the native towns in the vicinity from October, 1910, until February, 1911. Most of the cases occurred among children, usually females between the ages of 6 and 10 years. The death rate was very high, 90 per cent or more. Between 200 and 300 deaths occurred in the town of Ormoc alone.

BOARD FOR THE STUDY OF TROPICAL DISEASES.

During the year of 1910 this board was composed of Maj. Weston P. Chamberlain, Capt. Horace D. Bloombery, March 23, 1909, to February 14, 1910, and Capt. Edwin D. Kilborne, who was relieved December 14, 1910, by Capt. E. B. Vedder. In addition to the regular quarterly reports, several special reports have been furnished.

BERIBERI.

Last year attention was invited to the work accomplished by the English physicians working in the Malay Peninsula in the prevention of this disease by the use of rice which was undermilled, or unpolished, that is, rice with part or all of the pericarp and aleurone left on the grain. These experimenters had also been able to produce a polyneuritis in fowls by feeding them polished rice, and either to prevent or cure the same by the use of the unpolished rice. The tropical board had shown that in the polished rice there was a deficiency of potassium and phosphorus. The endosperm of rice consists of starch, except for a thin outer portion, called the aleurone layer, which contains the albuminous material of the seed, together with most of the fat. Outside of the endosperm and aleurone layer is the pericarp. The color of the pericarp varies in different species of rice from white to nearly black. The common varieties grown in the Philippines have the pericarp either brick red or yellowish white. The aleurone layer is adherent not only to the endosperm but also to the pericarp, so that more or less of it is removed when the pericarp is detached from the dried grain. Outside of the pericarp is the husk. In the process of milling all of the pericarp and most of the aleurone layer is milled or scoured off, and with these layers the phosphorous and albuminous constituents. In highly milled rice the grain is only a lump of starch. What is needed to prevent beriberi, as far as rice is concerned, is an undermilled rice, either of the red or yellowish-white variety. When the board first recommended changes in the scout ration in accord with these views, the question not being thoroughly worked out, the Filipino rice No. 2, which is a red rice undermilled, but also of an inferior quality, was recommended by them. It is now recognized

by them that it is a question of the amount of the pericarp and aleurone layer left, and not the color of the pericarp, which is of importance. It is considered that a rice containing over .4 per cent of phosphorus pentoxide will not cause beriberi; and one with less than that amount is unsafe if the rice forms the principal article of diet, as is so liable to be the case among oriental people. It is the opinion of the board that the phosphorus pentoxide does not of itself prevent beriberi, but that it is only an index of the beriberi-preventing power of the rice, or, in other words, an indication that a safe amount of the outer layers have been left. Rice with them is just as necessary an article of diet as bread is for the European or American. During the spring of 1910 the board began an extensive series of rice-feeding experiments on fowls, with a view to determining the effect of various grades of Filipino rices when used as an exclusive article of diet. Feeding tests on 59 cocks have been carried out, the period of observation for the individuals varying from 25 to 125 days. These experiments were carefully conducted, and such precautions taken that there was no possibility that any of the cocks received any unauthorized food. Examinations were made of the leg nerves of all the fowls which died. As a result of the work, the board reached the following conclusions:

(1) Fowls develop polyneuritis in about 30 days when fed excessively on highly milled rice, whether Saigon rice ("choice rice" of subsistence department) or Filipino No. 1 rice is used. That fowls on highly milled rice develop this disease has been known for years, but there was no record when we began that experiments had ever been tried with a Filipino No. 1 rice.

(2) Forcibly feeding highly milled rice to such fowls as have no appetite for it will not prevent the appearance of neuritis. Most fowls fed on highly milled rice quickly loose appetite and eat but a small part of their ration.

(3) Those fowls which voluntarily eat heartily of highly milled rice are able thereby to maintain their body weight and to defer or prevent the development of multiple neuritis. Three fowls which ate their full daily ration of rice remained well for 98, 97, and 78 days, respectively, at the end of which periods the experiments were discontinued.

(4) The administration of the inorganic salts of phosphorus and of potassium, either alone or combined, to fowls subsisting on a highly milled rice diet neither prevented multiple neuritis nor deferred its onset. For reasons to be stated in our special report, we did not try the effect of phytic acid combined with highly milled rice.

(5) Fowls fed on unhusked rice (pa[illegible] be) do not acquire multiple neuritis.

(6) Fowls fed on undermilled rice do not develop polyneuritis. The same result is obtained whether the grain has a red or a yellowish-white pericarp.

(7) Fowls which are allowed water but no food develop multiple neuritis. The same is true of fowls starved on reduced rations of a neuritis-preventing undermilled rice. We obtained this result in five cases. Previous observers have reported that starvation does not cause neuritis. In our cases when death was apparently close at hand we were unable to determine if neuritis or merely weakness existed. By carefully feeding these moribund cocks on a neuritis-preventing diet we were able to save many of them, and in a day or two strength

[illegible]

would return and the general condition improve. The symptoms of polyneuritis would then be apparent and subsequently, when the fowls were killed, their sciatic nerves would show degenerative changes

(8) Fowls confined without food and those fed on highly milled rice and water lose weight with equal rapidity. A loss of at least 20 per cent of bodily weight almost invariably occurs before the symptoms of neuritis become apparent.

(9) The signs and symptoms and the nerve appearances are identical in neuritis produced by starvation and in that produced by feeding polished rice.

(10) Spasticity was a late development in some of the cases of neuritis which were saved from death by the institution of mixed feeding. These fowls were subsequently killed, and in none of them did we find evidences of degeneration in the cord to account for the spastic gait.

After an additional series of experiments the board concluded further as follows:

(1) Polyneuritis gallinarum is not prevented by adding to a diet of polished rice any of the following substances: Potassium phosphate, potassium citrate, potassium carbonate, potassium chloride, magnesium phosphate, phytin, phosphoric acid, or phosphoric acid combined with potassium chloride.

(2) The neuritis-preventing substance in rice polishings is soluble in cold water and in cold alcohol.

(3) Polyneuritis gallinarum may be prevented by means of an extract of rice polishings containing only those substances soluble in cold water and cold alcohol. This extract, so far as at present known, has the following composition:

	Per cent.
Total solids	1.34
Ash	.03
Phosphorus pentoxide	.00165
Nitrogen	.0406
Sucrose	.88

(4) Multiple neuritis in fowls fed on polished rice is probably not due to lack of phosphorus compounds in the grain, as claimed by Schaumann, since out of each 1,000 parts of phosphorus contained in the rice polishings at least 999 are not concerned in preventing neuritis.

(5) The neuritis-preventing substance contained in rice polishings is capable of dialysis through a parchment membrane. This excludes all colloids from consideration.

The bearing of these results on the etiology of beriberi is still to be worked out. Stanton and Fraser (8) consider that neuritis in fowls is an index of the beriberi-producing power of a rice. These authors consider beriberi and polyneuritis gallinarum closely allied, while others hold the reverse view. From our experiments we are inclined to think that cocks readily develop multiple neuritis and that because certain causes excite nerve changes in the fowl it would be unsafe to assume that the same cause would produce neuritis in man. However, as Stanton and Fraser say, the acceptance of the polished rice theory of beriberi rests on testimony other than the identity of beriberi and the polyneuritis of domestic fowls.

On page 127, under the head of "Prevalence of certain diseases in the Philippines," remarks are made in regard to the occurrence of beriberi and the work of the board along this line.

EXPERIMENTS ON THE RELATIVE ABSORPTION OF SOLAR HEAT BY OLIVE DRAB AND KHAKI.

On the arrival at the sales department of the Depot Quartermaster in Manila of the first supply of the new olive-drab cotton uniform material, a sample was obtained and a series of experiments carried out to determine its heat absorbing power as compared with the khaki colored cotton material furnished by the Quartermaster's Department.

Two hundred and sixty-five temperature readings were made during these observations. Most sanitary authorities agree that in the Tropics the effects of the sun's rays make it necessary for a uniform to approach as nearly as possible to white, protection against the undue absorption of the solar heat ray depending entirely upon the color itself and not on the nature of the material or its texture.

In these experiments the atmospheric temperature indoors ranged from 27.5° C. to 31° C. In the bright sun the temperature of the air ranged from 31° C. to 37° C., averaging about 34°. When exposed to the direct rays of the sun, the temperature beneath olive-drab material starting at atmospheric temperature rapidly rose as a result of heat absorption, and after the lapse of an hour or more reached figures varying from 42.3° C. to 52.7° C., the atmospheric temperature remaining unchanged. Beneath white drilling the temperature never rose above 38.4° C. and was usually below the normal temperature of the body. The cotton olive-drab material weighed about 3 per cent more than the khaki. After washing and ironing, however, the difference was less marked, being only 1.7 per cent. Four thermometers were used, and these were frequently reversed to prevent mistakes. Tests were made by placing thermometers under materials on tables exposed to the sun, both on a bright and a cloudy day, in flasks of water covered with the materials, under helmets both on and off the head, and under the materials worn by soldiers as uniforms. In practically all of these tests the temperature was highest under the cotton olive-drab, next highest under the khaki, and lowest under the white. For nine observations taken at intervals between 5 and 75 minutes after exposure to bright sunlight, the average temperature was 42.4° C. beneath olive-drab, 40.9° C. beneath khaki, and 35.2° C. beneath white.

Summary.—From a consideration of the above facts it is the opinion of the board that the new olive-drab uniform material is not a good one for use in times of peace in the Tropics either for outer garments or for the covering of helmets. Khaki-colored fabric is much cooler for both these purposes. Khaki is not nearly as cool as white drilling, but, for other reasons, is better suited for garrison use. In campaign it is possible that the relative invisibility of olive-drab uniforms may compensate for their increased absorption of heat. For helmets in garrison in the Tropics white covers would probably be found so very much cooler as to make their use, in association with khaki garments, desirable. From the sanitary point of view it can be stated that if any change is made from our present khaki-colored

uniform it should be in the direction of a lighter shade rather than a darker one. If any protection against chemical rays is needed (which is by no means proved), it should not be gained by using dark outer garments.

DIPHTHERIA IN THE PHILIPPINES.

There are no records available prior to the American occupation in regard to the occurrence of diphtheria in the Philippine Islands, but according to the statements of the Philippine practitioners well-defined cases occurred at intervals. Under the American administration the records from 1900 to 1910, inclusive, for Manila show that 82 cases occurred with 48 deaths. The occurrence of the disease is scattered throughout the entire year, but appears to be more prevalent during the dry season. During the first six months of 1910, of the 40 individuals examined bacteriologically by the board, 20 showed clinical evidence of throat disease, and 6 of these proved positive for diphtheria. Eleven cases examined were "contacts" without obvious lesions, and of these 2 gave positive and 9 negative cultures.

It has been observed for some time that this disease was less prevalent in the Tropics. This is probably largely due to the continued warm weather with the open structure of the houses, with the free circulation of air throughout the dwellings.

DIPHTHERIA OR "ROUP" IN COCKS.

This disease is a common one in temperate as well as tropical countries and affects the mucous membranes of the eye, nose, throat, and sometimes the lower air passages. Nine cases were examined. In all but two of these the disease was confined to the eye. In five out of seven ocular cases the disease resulted fatally in a few days. The lesion was limited to one eye, except in one case. A diphtheria-like bacillus was isolated. The board concluded that this bacillus was not the true virulent Klebs-Loeffler's bacillus and that the eye disease in the seven cases studied had no relationship to human diphtheria, since it appeared to be neither modified nor prevented by the administration of the antitoxin of diphtheria. They also concluded that true diphtheria caused by the bacillus diphtheria rarely, if ever, occurs in birds.

EPIDEMIC OF TYPHOID FEVER AMONG NATIVES AT SAN FERNANDO, UNION, P. I.

The report of the board in regard to the occurrence of typhoid fever at San Fernando is interesting, showing as it does the occurrence of this disease in epidemic form among the natives. Information having reached the board that an epidemic of fever was prevailing at this place, one of the members was sent to study the epidemic. As was usual in a Filipino town, it was difficult or impossible to obtain statistics of any value. Smears and drops of blood were taken from all cases who admitted having had fever during the preceding three months. Twenty-three specimens were obtained in the town proper. Of these 2 were evidently cases of dysentery, of the 21 remaining specimens, 18 gave positive Widal reaction and 3 negative. A second visit to one shack where 4 specimens which gave positive

Widals were obtained, brought forth the information that of the 11 original inhabitants, 2 children had died recently of fever, and that 8 others of the family had been sick at about the same time, the mother alone escaping. Of these 8 persons, 5 gave positive Widal and 1 could not be brought under observation.

Summary and conclusion.—Out of 42 typhoid-agglutination tests done on the blood of natives at San Fernando, 20 were positive and 22 negative. Of the 22 negative cases 2 were clinically dysentery and 13 were apparently healthy men. Of 4 cultures from stools, 2 were positive for *Bacillus typhosus* and 2 negative. One culture from the blood was negative. Of 42 blood smears all were negative for malarial parasites.

In view of the high percentage of positive laboratory findings among those examined, the board is of the opinion that an extensive epidemic of typhoid fever had prevailed among the natives at San Fernando and was abating at the time of our visit.

PREVALENCE OF TYPHOID FEVER IN THE PHILIPPINES.

A large amount of work has been done in regard to typhoid fever, both for the purpose of diagnosis and to determine if possible the prevalence of this disease among the natives. During the routine typhoid work for two years ending September 30, 1910, the board has examined the blood of 41 Filipinos who were suffering from some febrile disease considered by the attending physician to be possibly typhoid. Of these 21 gave positive Widals. In the town of Parang 84 residents (Chinese, Japanese, Moros, Hindoos, and Filipinos) were examined. Of this number 13 gave positive Widals. Five of this number were reported sick while 2 others had slight fever, but no other symptoms of the disease. In view of this and other work of the same character, and after consideration of the findings of other observers, the board is of the opinion that the application of accurate diagnostic methods to the mass of the natives will show that typhoid is common in the Philippines at large as it has been found to be in India, in parts of Indo-China, and elsewhere in the tropical world.

WHOOPING COUGH IN THE PHILIPPINES.

The board reports some work done during an epidemic of whooping cough and makes mention of several other epidemics of this disease concerning which they were able to obtain information.

EXAMINATIONS OF BEEF AFTER TWO YEARS' COLD STORAGE IN MANILA.

The board, in accordance with the request of the chief commissary, Philippines Division, made bacteriological and feeding tests of beef that had been kept in cold storage for two years in Manila, and of some that had been recently received. When cooked as steaks the old sample did not have quite the same aroma as the new, but had a good flavor and would probably have been accepted as an excellent steak by anyone not aware of the length of storage. About the only gross evidence of long storage in the old specimens were slight discolorations in the fascias and a general loss of water. There was no evidence of the presence of ptomaines nor of harmful bacteria.

OBSERVATION OF IGOROTS.

Two members of the board in March and April of 1910, while on a visit to Baguio, P. I., made a series of experiments and observations The following conclusions were reached:

(1) That the Igorots are an industrious, well-developed, and vigorous people, living in a climate comparatively temperate.

(2) That 92.5 per cent of 119 adult males examined showed ova of some intestinal worm in the stools.

(3) That the infection rate with uncinaria among adult males was 29 per cent, which is probably higher than the average for the same class among the lowland Filipinos.

(4) That the hookworm rate for children is lower, about 18 per cent.

(5) That malaria and filariasis are infrequent or absent.

(6) That the blood shows a chronic condition of increased eosinophiles and small lymphocyter with diminished polymorphonuclear neutrophiles.

(7) That the increase of lymphocytes and diminution of polymorphonuclears seems to be dependent on tropical conditions and will develop in white men living in the Philippines.

(8) That this decrease in the percentage of polymorphonuclear elements in the blood may possibly be a factor in the lowered resistance to certain infectious diseases seen in tropical people.

THE WASSERMANN REACTION IN LEPROSY.

The sera of 21 cases of leprosy were examined. Three gave a positive Wassermann. Two of these passed from observation, while the third gave a history of syphilis of seven years' duration. From this limited experience the board considers it doubtful if a positive reaction is to be obtained as a result of infection with *Bacillus lepræ*. Before making a positive statement in leprosy cases it is necessary to consider the possibility of antecedent syphilis or yaws.

IPECAC TREATMENT OF DYSENTERY.

A preliminary account of some experiments undertaken to test the efficacy of the ipecac treatment of dysentery was furnished by Capt. Vedder, a member of the board. He reached the following conclusions:

(1) That 2 per cent fluid extract of ipecac inhibits the growth of dysentery bacilli.

(2) This is not a specific action, since ipecac also inhibits the growth of other bacteria, while other drugs such as hydrastis and digitalis are quite as powerful as ipecac in inhibiting dysentery bacilli.

(3) The *Bacillus dysenteriæ* of the Shiga type that we worked with appears to be more susceptible to the action of ipecac and other drugs than the Flexner strain.

(4) The treatment of bacillary dysentery by ipecac is not recommended because it has not been shown that ipecac possesses any greater activity against dysentery bacilli than many other drugs, and because it would probably be difficult, on account of dilution with intestinal contents, to give sufficient ipecac to make a solution in the intestine as strong as a 2 per cent solution of the fluid extract, which

was the strength used in these experiments. However, since ipecac has been shown to inhibit the growth of dysentery bacilli to some extent, it has probably done patients with bacillary dysentery no harm, and on the other hand may possibly have accomplished some good, particularly if the dysentery was caused by the Shiga type of *Bacillus dysenteriæ*.

(5) That ipecac is a powerful amœbacide, since the weakest preparation used (with the exception of the deemetized) killed in a dilution of 1 to 10,000.

(6) Different preparations of ipecac on the market vary greatly in their ingredients and in the power of killing amœbæ.

(7) Emetin is a powerful amœbacide, killing amœbæ in dilutions of 1 to 100,000, which is double the dilution that was amœbacidal when fluid extract of ipecac was used.

TESTS OF 16-MESH BRONZE WIRE NETTING.

Considerable work has been done during the quarter on the tests called for by letter of July 15, 1910, office of the Surgeon General, to determine if 16-mesh bronze gauze would keep out Philippine anophelinæ. About 400 anopheles mosquitoes were shipped to the board from Camp Gregg, a post where there is much malaria. Many died en route. About 76 were experimented with on various occasions to determine if they would pass through the 16-mesh gauze when separated by it from food and water. None passed through.

TRANSPORTS.

SANITARY CONDITION.

The sanitary condition of the various transports and the accommodation provided for troops on them has been in the main satisfactory, and the majority of the sanitary faults which exist or have arisen from time to time have been corrected with promptness.

The surgeon of the transport *Sheridan* in a special sanitary report commented as follows upon the ventilation of the troop quarters:

> With a full regiment aboard this transport, the ventilating system is not sufficient to furnish the requisite amount of fresh air. When, on account of heavy seas or cold weather, it is impossbile for soldiers to sleep on deck or for hatches or ports to be open, it is found that the surgeon is called upon to treat an increasing number of ill-defined maladies (e. g., headache, to which no cause can be assigned), that are generally ascribed to a deficient supply of oxygen. A visit to the troop quarters in the early morning hours under the circumstances described will always convince any person possessing a normal sense of smell that the air is foul.

The surgeon further comments on the fact that the blowers are insufficient in number and in power, and on the fact that there is no exhaust system. He also states that the registers in distributing pipes, in many instances, open immediately over upper bunks, making these unpleasant, if not actually dangerous to the occupants, and that in consequence such registers are usually closed or stuffed with paper by the men to which the bunks are assigned, thus seriously curtailing the supply of fresh air to the compartment.

He recommends separate plenum and exhaust blowers for each compartment, with air ducts for each system having openings in various parts of the compartment so situated as to introduce fresh

and remove vitiated air in all parts of the space without the production of uncomfortable and dangerous drafts.

Similar recommendations are made with reference to ventilation of quarters for the ship's crew, and, should the system be installed, it should be extended to include the hospital.

The transport *Sherman* went into commission March 30, 1910, after having been rebuilt and refitted. She is reported as being in excellent sanitary condition. While being refitted a system of ventilating flues was installed, which is stated by the surgeon to secure an abundant supply of air in all parts of the ship.

One case of variola in an American soldier occurred on the *Logan* in December, 1910; one case in a Filipino waiter on the *Sheridan* in November, 1910; and one case in an American waiter on the *Sherman* in June, 1910. In each case the necessary precautions in regard to isolation and disinfection were rigidly enforced. Every person on board, including the crew, who did not show recent successful vaccination, were revaccinated. No other cases occurred.

Outbreaks of measles occurred on the *Logan* and the *Crook*. On the *Logan* there were 33 cases and on the *Crook* 12 cases; one case also occurred on the *Kilpatrick*. There was no death among these cases.

There were four cases of mumps on the *Logan* in February, 1911, and three other sporadic cases at other times. One case occurred on the *Sheridan* in February, 1911.

There were three cases of varicella in one family on the *Sheridan* in February, 1911, one case on the *Logan* in the same month, and one on the *Kilpatrick* in March.

An epidemic of ptomaine poisoning, following the use of fish secured at Nagasaki, occurred on the *Logan* in November, 1910. Quite a number of men were affected, but no severe cases occurred.

DENTAL AND ORAL DISEASES.

The number of dental operations during the year was 48,615, being an increase over the preceding year, which was 47,378. The ratio per 1,000 of mean strength was also greater, being 620.71, as compared with 567.33. This, however, can not be taken as a measure of the dental diseases in the Army, but represents what the number of dentists available are able to accomplish. The number of dentists authorized has been increased by Congress, so that ultimately each man in the Army can receive at least one treatment yearly.

The summary of the work of contract dental surgeons is contained in Table No. 56.

TABLE NO. 56.—*Dental and oral diseases.*

	Cases admitted to treatment.		Operations performed.	
	Number.	Ratio.	Number.	Ratio.
United States (Continental), excluding Alaska	31,284	533.17	30,779	524.56
Philippine Islands	16,695	909.31	18,351	999.51
Hawaii	636	494.56	536	416.80
Total	48,615	620.71	49,666	634.13

NOTE.—No dental report received in the year from Alaska or Porto Rico.

TABLE NO. 56.—*Dental and oral diseases.*

DENTAL CARIES—NUMBER OF TEETH TREATED.

	White troops.		Colored troops.		Filipino troops.		Total.	
	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.
United States (Continental), excluding Alaska	18,404	330.47	526	176.16	.....	.....	18,930	322.62
Philippine Islands	9,339	703.93	.....	.....	235	46.14	9,574	521.16
Hawaii	369	286.94	.....	.....	.....	.....	369	286.94
Total	28,112	400.21	526	176.16	235	46.14	28,873	368.65

GENERAL HOSPITALS.

GENERAL HOSPITAL, SAN FRANCISCO, CAL.

This hospital is used as a base hospital for the Philippines and Hawaii and is the largest general hospital in the Army.

No construction, other than routine repairs and painting, has been carried out during the year, but plans for the following additions and building have been approved, and it is expected that they will be completed during the fiscal year: A new officers' ward, a new isolation ward, an addition to nurses' quarters, new bath and toilet rooms for wards, addition to power house, laundry, and dining room, new roads and walks.

Plans for a new kitchen, sun rooms, and hydrotherapeutic rooms are being prepared.

The installation of the new fire line system of water supply has been completed, and the hospital has been changed from the Spring Valley water system of San Francisco to the new Presidio water supply.

Barracks are very much needed for Company B, Hospital Corps, which is now crowded in temporary buildings.

The woman's ward has continued to be of great benefit to the families of officers and enlisted men, and although the accommodations are limited no case among those entitled to medical attention has been refused admission during the year.

The number admitted during the year, including civilians and military convicts, was 3,094, being an increase of 91 over the preceding year. There were 307 cases remaining in hospital December 31, 1909, making a grand total of 3,401 patients treated in hospital. Of this number 90 were officers, 2,913 enlisted men, 10 military convicts, 214 male civilians, 157 female civilians, and 17 children under 14 years.

There were 1,625 medical, 1,016 surgical, and 760 venereal cases treated.

The daily average number of patients was 281.3+, being an increase of 10.4 over the preceding year.

The average number of days in hospital was as follows:

	Officers.	Enlisted men.	Military convicts.	Civilians.		Children under 14.	
				Male.	Female.	Male.	Female.
Medical	43.12	26.30	82.67	32.74	17.53	30.29	14.00
Surgical	38.84	32.53	9.25	29.05	18.54	18.17	27.00
Venereal	7.00	35.65	.....	31.00	.....	.....	.....

The following tables show the movement of the sick, together with the principal causes of admission during the calendar year of 1910, civilians and military convicts being included:

	From islands.	From States.	Total.
Remaining in hospital Dec. 31, 1909	82	225	307
Admissions:			
For gunshot wounds	1	4	
Diarrhea and dysentery	21	20	
Malarial fevers	8	41	
Typhoid fever	11	5	
Rheumatic affections	8	42	
Venereal diseases	41	661	
Injuries	13	290	
Insanity	22	21	
Alcoholism	3	83	
All other causes	224	1,575	
Total admissions during the year	352	2,742	3,094
Total admissions to be accounted for	434	2,967	3,401
Dispositions:			
Total returned to duty	154	2,174	
Discharged for disability	83	122	
Discharged by expiration	21	25	
Deaths from all causes	5	33	
Deserted	1	3	
Transferred:			
Hot Springs, Ark	8	6	
Fort Bayard, N. Mex	57	26	
Government Hospital for Insane	12	18	
Walter Reed General Hospital, District of Columbia	2	.....	
To other hospitals	.....	.....	
Otherwise disposed of	31	318	
Total dispositions during the year	374	2,725	3,099
Remaining in hospital, Dec. 31, 1910	60	242	302

There were 38 deaths during the year, the causes being as follows:

Deaths from all causes in 1910.

	Officers.	Enlisted men.	Civilians.	Total.
1. General Diseases:				
(*a*) Infectious—				
Amœbic dysentery, chronic		1		
Tuberculosis—				
Pulmonary, chronic		1	2	
Miliary, general			1	
Syphilis, cerebral, tertiary		1		
(*b*) Other general diseases—				
Cancer of right lung			1	
Cancer of stomach		1	1	
Diabetes mellitus		1		
		5	5	10
2. Diseases of the nervous system:				
Menigitis, chronic			1	
Meningo-encephalitis, basal			1	
			2	2
3. Diseases of the circulatory system:				
Endocarditis—				
Valvular, chronic		1	1	
Malignant, acute		1		
Aortic regurgitation			1	
Thoracic aneurism			1	
Thrombosis, right meningeal artery			1	
		2	4	6
4. Diseases of the respiratory system:				
Empyema, thoracic, right side			1	
Pneumonia, lobar, acute			1[1]	
Edœma of lungs			1	
			3	3
5. Diseases of the digestive system:				
Peritonitis, general, acute			1	
Hemmorrhage, gastric and intestinal			1	
			2	2
6. Diseases genito-urinary system (nonvenereal):				
Cystitis, chronic			1	
Nephritis, chronic—				
Interstitial		1	1	
Parenchymatous		1	2	
		2	4	6
7. Old age:				
Senile debility			1	1
8. External causes:				
Gunshot wound—				
Homicidal			1	
Suicidal		1		
Pulmonary hemorrhage, traumatic, accidental			1	
Cerebral hemorrhage, accidental		1		
Street-car injury, accidental			1	
Fractures, compound, of skull, accidental (military convict)			1	
Foreign body in air passages			1	
Methyl alcohol poisoning, accidental		1		
		3	5	8
		12	26	[1]38

[1] 1 Military convict included in total.

There were 205 discharges on certificate of disability, the causes being as follows:

General diseases	65	Diseases of the—Continued.	
Diseases of the—		Organs of locomotion	9
Nervous system	31	Malformations	3
Eye and its adnexa	7	Ill-defined diseases	10
Ear and its adnexa	11	Conditions due to external causes or injuries	35
Circulatory system	9		
Respiratory system	6	Total	205
Digestive system	14		
Genito-urinary system	5		

There were 12 discharges each for secondary syphilis and chronic gonorrheal rheumatism. This was the greatest number of discharges for any one disease. The next largest number was 9, this being the number of discharges for each of the following: Epilepsy, grand-mal; neurasthenia, and drug habit.

An active surgical clinic is maintained at this hospital, the following being a condensed tabular statement of the surgical operations:

Surgical operations for the year ending Dec. 31, 1910.

Operations.	Officers.	Enlisted men.	Total.	Retired officers.	Retired enlisted men.	Army Nurse Corps.	Civilians.	Grand total.
Cranium		1	1					1
Eye		8	8					8
Ear	1	1	2				1	3
Nose and throat	1	76	77				15	92
Face (other)		2	2					2
Neck	1	2	3	1			1	5
Upper extremity		14	14			1	3	18
Thorax		2	2				1	3
Abdomen (laparotomy)	6	82	88	1			41	130
Gynecological:								
External						1	88	89
Laparotomy							30	30
Minor (not included above)	4	130	134				9	143
Lower extremity		28	28	1	1		3	33
Total	13	346	359	3	1	2	192	557

Military convicts, none.

The variety of surgical cases provides a very excellent opportunity for the development of surgical study, while the wealth of clinical material is such that constant practice in the operating room is available.

There was no operative mortality during the year. There were but two deaths in which previous operation of exploratory nature had been done. One, a soldier, had an inoperable liver abscess. The other was a woman with intestinal obstruction, following an old general peritonitis. In neither case would the condition of the patient warrant further operative procedure.

An opportunity to use the Hudson skull instruments was furnished by a severe case of compound fracture of the skull, in which a horse had rolled over on a trooper, depressing a fragment (entire thickness of skull) 1 centimeter. This fragment was easily and quickly removed with the Hudson instruments and the patient made an uninterrupted recovery.

It is worthy of note that all appendicitis cases have been operated upon at the earliest possible moment, regardless of hour admitted. There were in all (military and civil) 68 cases. All recovered without sequelæ. I believe that this lack of mortality is due to immediate operation upon admission to this hospital. There were a few cases, mostly transferred from a distance, that were suppurative when opened. Such patients received the Murphy treatment for diffuse peritonitis and, as has been stated, all recovered.

GYNECOLOGY AND OBSTETRICS.

During 1910 practically every gynecological operation of approved technic has been performed and with most gratifying results. The women's ward has proved a blessing to the families of officers and enlisted men. In the latter class it has often prevented the pauperizing of patients The only alternative is a charity bed in a civil hospital.

Twenty-four pregnant women have been delivered at term and 10 incomplete abortions rendered complete.

A large laboratory is maintained for the use of the hospital and for the special work of the posts on the Pacific coast. The report of the work done will be found under the general heading of "Laboratories."

The mean strength of the personnel on duty at this hospital for the year was 13 officers and 159 enlisted men of the Hospital Corps. Company B, Hospital Corps, was also stationed at this hospital with a mean strength of 3 officers and 126 enlisted men.

WALTER REED GENERAL HOSPITAL.

This is the general hospital at Washington, D. C., and also serves as a post hospital for Washington Barracks, D. C., an autoambulance conveying the patients to the hospital from the post at sick call and answering emergency calls.

This hospital has, since its occupation May 1, 1909, proved in most respects a most satisfactory building for its purpose; its equipment has been added to from time to time and it is now, in almost every respect, complete. Efforts have been made to furnish the private rooms for officers as completely as possible. They are quite as well furnished now as the private rooms in the best civil hospitals.

A building for quarters for nurses of the Army Nurse Corps to accommodate 20 nurses has been constructed and was ready for occupancy June 1, 1911. A mortuary was completed during March, 1911. The following new buildings are urgently needed: Two double sets noncommissioned officers' quarters, exchange and gymnasium, blacksmith and wagon shop, bakery, two sets officers' quarters.

A great deal remains to be done in the way of filling and grading, road building, sodding, and tree planting before the grounds about the hospital and accessory buildings can be considered presentable.

The number of cases admitted during the year, including retired officers and enlisted men, civilians, and military convicts, was 594, being an increase of 25 over the preceding year. Of this number there were 74 officers, 449 enlisted men, 6 retired officers, 32 retired and discharged soldiers, 2 military convicts, and 31 civilians. Of this number 436 were medical cases and 158 were surgical.

The daily average number of patients was as follows: Officers, 13.72; enlisted men, 35.23; civilians, 2.92; retired officers, 0.37; retired soldiers, 1.47; discharged soldiers, 0.75; and military convicts, 0.35; total, 54.81.

The following table shows the movement of the sick, together with the principal causes of admission during the calendar year of 1910, civilians being included:

Remaining on sick report Dec. 31, 1909	45
Admissions:	
For gunshot wounds	0
For diarrhea and dysentery	9
For malarial fevers	7
For typhoid fever	11
For rheumatic affections	18
For venereal diseases	88

Admissions—Continued.	
For injuries	63
For insanity	7
For alcoholism	17
For all other causes	374
Total admissions during the year	594
Total admissions to be accounted for	639
Dispositions:	
Total returned to duty	432
Discharged for disability	38
Discharged per expiration term of service	11
Deaths from all causes	9
Transferred to other general hospitals	5
Otherwise disposed of	87
Total dispositions during the year	582
Remaining in hospital Dec. 31, 1910	57

There were 9 deaths; of this number 3 were officers, 2 enlisted men, 2 retired soldiers, and 2 civilians. The causes were as follows: Carcinoma sigmoid flexure, carcinoma of stomach, chronic valvular heart disease, acute parenchymatous nephritis, cerebral embolism, acute alcoholism (2), tubercular enteritis, malignant disease of intestines.

There were 38 enlisted men discharged on certificate of disability for 30 different causes, as follows: Syphilis (4), locomotor ataxia (2), hemiplegia, organic heart disease, paraplegia, amputation of leg (2), osteo-periostitis chronic tubercular, right tibia, chronic thecitis, trachoma, mitral regurgitation, total blindness (both eyes), total deafness right ear, corns multiple (both feet), dysentery, chronic (amœbic), stricture of the rectum, tachycardia and dyspnœa, chronic tubercular orchitis, senile debility, paralysis of anterior group of leg muscles (due to division of the left external popliteal nerve), cerebral embolism, defective vision, spastic paralysis, flat feet (4), pulmonary tuberculous, hysteria, carcinoma segmoid flexure, chronic tuberculous arthritis, chronic parenchymatous nephritis, osteo-periostitis chronic (right tibia), and paralysis flexor muscles (right forearm).

An active surgical clinic is maintained at this hospital. During the year a large number of major and minor surgical operations were performed, the most of which were successful.

The average number of medical officers on duty during the year was 7. The average number of enlisted men was 64. Company C, Hospital Corps, which is attached to this hospital, had an average of 3 medical officers on duty and 125 enlisted men.

Statement of work done in laboratory during year 1910.

Examinations of—	
Urine	564
Blood	124
Feces	73
Sputum	50
Stomach contents	2
Total examinations	813

GENERAL HOSPITAL, FORT BAYARD, N. MEX.

This hospital, which is intended for the treatment of cases of pulmonary tuberculosis in the Army, was commanded during the year by Lieut. Col. George E. Bushnell, Medical Corps.

The following table shows the number of medical and surgical cases treated during the year:

	Medical cases.	Surgical cases.	Total.
Officers	28	.....	28
Enlisted men	443	28	471
Beneficiaries of the soldiers' home	510	.....	510
Civilians	78	12	90
Total	1,059	40	1,099

There were 620 cases of tuberculosis under treatment. The daily average of patients was:

Officers	11.3
Enlisted men	77.1
Beneficiaries of the soldiers' home	115.3
Civilians	14.5
Total mean strength of patients	218.2

The following table shows the movement of the sick during the year, with the principal causes of admission and dispositions:

	Officers, enlisted men, and civilians.	Beneficiaries of soldiers' home.	Total.
ADMISSIONS.			
Tuberculosis	214	406	620
Diarrhea and dysentery	3	.....	3
Malarial fever	1	.....	1
Typhoid fever	2	2	4
Rheumatic affections	10	.....	10
Venereal diseases	7	.....	7
Injuries	30	.....	30
Insanity	2	.....	2
Alcoholism	4	.....	4
All other causes	90	.....	90
Total admissions during 1910	363	408	771
Remaining in hospital on Dec. 31, 1909	226	102	328
Total to be accounted for	589	510	1,099
DISPOSITIONS.			
Left hospital	.....	346	346
Returned to duty	155	.....	155
Discharged for disability	260	.....	260
Discharged by expiration of term of service	2	.....	2
Deaths from all causes	[1] 20	37	57
Transferred to other general hospitals	2	.....	2
Otherwise disposed of	57	.....	57
Total dispositions, 1910	496	383	879
Remaining in hospital Dec. 31, 1910	93	127	220
Total to be accounted for	589	510	1,099

[1] Includes one soldier who died while absent on furlough.

The causes and number of deaths occurring at this hospital during the year appear in the following table:

Causes of death.	Officers.	Enlisted men.	Beneficiaries of soldiers' home.	Civilians.	Total.
Aneurism of aortic arch, ruptured		1			1
Aneurism of left pulmonary artery, ruptured		1			1
Endocarditis, tuberculous		1			1
Lepto-meningitis, tuberculous, chronic			1		1
Myocarditis, chronic			1		1
Peritonitis, septic, diffuse			1		1
Tuberculosis:					
Miliary, general, acute		1			1
Pulmonary		8	32	6	46
Typhoid fever		1	2		3
Total		13	37	6	56

The following is a statement of discharges from the Army, with the causes:

Causes of discharge.	Officers.	Enlisted men.
By expiration of term of service		2
For disability, as follows:		
Pulmonary tuberculosis		255
Tuberculous arthritis		1
Tuberculous spondylitis		1
Hysteria		1
Splanchnoptosis		1
Officer of Philippines Scouts discharged for disability by order of the Secretary of War	1	
Total	1	261

There were 51 major surgical operations performed during the year. Of the number 44 were successful, 5 partly successful, 1 was a failure, and 1 died. The last was a case of general septic peritonitis.

The laboratory work done during the year was as follows:

Sputum examinations:	
Negative for tubercle bacilli: 10 examinations upon successive days of each month	3,541
Positive for tubercle bacilli: one examination every three months	935
Urine examinations	1,390
Hemoglobin counts	904
Blood examinations: Counts, 16; for malaria, 20; Widal, 13	49
Milk test (number of cows)	129
Water analyses	5
Autopsies, human	53
Tuberculin tests, cattle	120
Autopsies upon animals (cows)	14
X-ray examinations and photography	60
Other examinations	98

Six cases in which pulmonary tuberculosis existed were readmitted for treatment of other condition. Three cases were admitted for suspected pulmonary tuberculosis, 2 of which proved to have thoracic aneurism, and 1 typhoid fever with unusually marked pulmonary involvement.

Five cases of tuberculosis other than pulmonary were treated (2 cases of Pott's disease, 2 cases of laryngeal tuberculosis, and 1 case of tuberculous arthritis).

Important complications existed in 94 cases, as follows: Tuberculous laryngitis in 39; pleurisy with effusion in 12; alcoholism in 9; syphilis in 13; empyema in 3; tuberculous fistula in ano in 4; tuberculous adenitis in 3; tuberculous otitis in 6; aortic stenosis, aortic regurgitation, tuberculous epididymitis, septic pericarditis, and tuberculous nephritis in 1 each.

The record of completed cases of tuberculosis 1908 to 1910, United States Army General Hospital, Fort Bayard, N. Mex., is printed as an appendix to this report and bound separately.

The mean strength of the personnel on duty during the year was as follows:

Medical officers	8
Other officers	3
Noncommissioned staff	2
Hospital Corps detachment (including 7 men under treatment for pulmonary tuberculosis)	120
Signal Corps	1
Army Nurse Corps	19

One double set of Hospital Corps sergeants' quarters has been completed during the year, and three additional sets of officers' quarters and one field officer's quarters are in process of construction. Other new buildings which are now in progress are a new power house and two new wards for ambulant patients. The power house will be equipped with larger boilers and dynamos and more ample facilities for the manufacture of ice and for cold storage than was possessed by the old plant.

The new wards for ambulant patients are constructed after the pattern of the building known as Ward No. 2, with minor changes. They are built about open courts in which the patients sleep in the open air throughout the year. The three wards have a capacity of 120 patients. About 40 additional patients can be accommodated on the porches of the old barracks adjacent to the wards.

An addition to the hospital which is urgently needed is a women's infirmary for the reception of wives of officers who are afflicted with tuberculosis. It is proposed to remodel for that purpose the old double set of officers' quarters formerly occupied as quarters by the Army Nurse Corps.

ARMY AND NAVY GENERAL HOSPITAL, HOT SPRINGS, ARK.

This hospital is intended especially for patients having diseases in which hydrotherapeutic treatment is indicated. Paragraph 1459, Army Regulations, as amended by General Order 174, War Department, 1910, states that—

> The Army and Navy General Hospital, Hot Springs, Ark., is under the direction of the Secretary of War, and is devoted to the treatment of the officers and enlisted men of the military and naval service of the United States, cadets at the United States Military and Naval Academies, officers of the Revenue-Cutter Service, officers of the Public Health and Marine-Hospital Service, and honorably discharged soldiers and sailors of the Regular and Volunteer Army and Navy of the United States, for such diseases as the waters of the hot springs of Arkansas have an established reputation in benefiting.

During the year 744 cases were admitted, this being a decrease of five from the preceding year. There were 95 cases remaining December 31, making a total of 839 treated during the year. Of this number 32 were officers, 155 enlisted men, and 652 civilians, chiefly veterans of the Civil War admitted in accordance with law. The daily average number of patients was 92.8. Of this number, 5.6 were officers, 20.2 enlisted men, and 67 civilians.

The following table shows the movements of the sick, together with the principal causes of admission, during the calendar year of 1910:

Numerical statement of admissions.

Remaining in hospital Dec. 31, 1909	95
Admissions:	
Diarrhea and dysentery	10
Malarial fevers	7
Rheumatic affections	404
Venereal diseases	9
Injuries	16
Alcoholism	2
All other causes	296
Total	839
Disposition:	
Returned to duty	118
Died	22
Discharged on certificate of disability	24
Discharged, expiration term of service	6
Transferred	5
Discharged from hospital (civilians)	554
Otherwise disposed of	3
Remaining Dec. 31, 1910	107
Total	839

There were 22 deaths during the year. Of this number 1 was an officer, 9 were enlisted men, and 12 were civilians. The following table shows the causes of deaths:

Chronic interstitial nephritis	3	Croupous pneumonia	1
Chronic parenchymatous nephritis	7	Cirrhosis of the liver	1
Spinal tuberculosis	1	Arthritis deformans	1
Abscess of the liver	1	Cerebral hemorrhage	1
Acute appendicitis	1	Mitral insufficiency	1
Suicide by morphine	1		
Diabetes mellitus	2	Total	22
Fibroid pneumonia	1		

There were 24 discharges on certificate of disability. The following is a list of the causes:

Chronic gonorrheal arthritis	1	Chronic lead poisoning	1
Chronic rheumatism	7	Spinal neurasthenia	1
Arthritis deformans	1	Mental incompetency	2
Chronic alcoholism	1	Habitual dislocation of hip	1
Chronic parenchymatous nephritis	1	Cirrhosis of the liver	1
Chronic interstitial nephritis	1	Carcinoma of the intestines	1
Diabetes mellitus	1		
Chronic mucous gastritis	1	Total	24
Mitral insufficiency	3		

The surgical clinic at this hospital is of necessity small.

The following is a statement of the laboratory work done:

Specimens examined.

Gastric contents	3	Sputum	52
Blood	148	Tissue sections	1
Feces	103	Urine	1,107

The mean strength of the command for the year was, officers 4.4 and enlisted men 54.4.

DIVISION HOSPITAL, MANILA, P. I.

This hospital is the general hospital for the Philippines. It differs from the general hospitals in this country in that it is not directly under the control of the Surgeon General, but owing to its geographic location it is under the authority of the division commander.

The number admitted during the year, including civilians and natives troop, was 2,398. Of this number 1,573 were medical and 825 surgical cases. There were 106 officers, 1,627 enlisted men, 116 native enlisted men, and 549 civilians (American and natives). The daily average was 138.57. Of this number 8.58 were officers, 94.91 enlisted men (Americans) 12.08 Philippine Scouts, and 23 civilians.

The following table shows the movement of the sick, together with the principal causes of admission, during the calendar year 1910:

CAUSES.

Causes.	Officers.	Enlisted men, American.	Scouts.	Civilians.
For gunshot wounds		5	2	1
Diarrhea and dysentery	4	37	4	10
Malarial fevers	4	81	11	17
Typhoid fever	1	10		5
Rheumatic affections	1	27	1	4
Venereal diseases	4	417	18	36
Injuries	11	107	15	69
Insanity		6	2	4
Alcoholism	3	49		8
All other causes	78	888	63	395
Total	106	1,627	116	549

DISPOSITIONS.

Returned to duty	89	1,277	90	
Discharged for disability			35	
Discharged per expiration of term		7	1	
Deaths from all causes	1	5	3	13
Deserted		1		
Transferred to other hospitals	28	289	1	10
Otherwise disposed of				506
Total	118	1,579	130	529

Total admissions during the year	2,398
Remaining in hospital Dec. 31, 1909	95
Total to be accounted for	2,493
Total dispositions during the year	2,356
Remaining in hospital Dec. 31, 1910	137

There were 22 deaths during the year, the causes being as follows:

Diabetes	1	Pneumonia	1
Diphtheria	1	Pulmonary embolism	1
Mastoiditis	1	Shock following operation	1
Nephritis	1	Suicide	1
Pancreatitis	1	Tuberculosis, pulmonary	8
Peritonitis	5		

Included in this number were 1 officer, 5 enlisted men (Americans), 3 Philippine Scouts, and 13 civilians. Six of the 13 deaths among civilians were due to pulmonary tuberculosis. American soldiers are not discharged for disability in the Philippines, except in very rare cases, and none discharged for disability at this hospital during the year 1910. All native enlisted men physically disabled for service are discharged in the islands. The following table shows the number discharged at this hospital during the year, and the causes:

Causes of disability.

Aneurism, thoracic aorta	1	Nephritis, chronic	4
Atrophy of muscles, both legs	1	Neuritis, chronic	2
Ankylosis, elbow joint	1	Paralysis of thumb, following injury	1
Beriberi	1	Retinal choroidal atrophy of eye	1
Bronchitis, chronic	1	Synovitis, chronic	1
Gunshot wounds and sequalæ	1	Tuberculosis, pulmonary	15
Loss of fingers, following gangrene	1		
Mental depression and insufficiency	3	Total	35
Mitral insufficiency	1		

An active surgical clinic is maintained. During the year there were 269 operations, with 8 deaths. These deaths were included in the list above, and were: Mastoiditis, 1; pancreatitis, 1; peritonitis, 5; and shock, 1. In the eye, ear, nose and throat department there were 8,385 cases treated during the year; of this number 1,330 were officers, 3,937 enlisted men, 1,862 authorized civilians, and 1,256 others (not authorized). In this department there were 329 refractions and 14 operations.

The following is a condensed tabular statement of the work done in the laboratory:

Examinations made in the pathological laboratory from Jan. 1 to Dec. 31, 1910.

Blood examinations	3,012	Water analyses	390
Urine	2,187	Autopsies	15
Sputum	118	Pathological sections	33
Feces	2,212	Other examinations	64

During the year there have been various improvements in the hospital and several additions. All the buildings have been painted, porches have been built for several wards and for the noncommissioned officers' quarters, diet kitchens for several of the wards have been added, and new floors laid; the grounds have been improved, new sidewalks and drains laid, and improvements and rearrangements made in the library, post exchange, recreation room, and issue room.

The average number of officers on duty during the year was 10, and Hospital Corps men, 85.

PROVIDENCE HOSPITAL.

The act approved June 25,1910, having appropriated $19,000 for the support and medical treatment of destitute patients in the city of Washington, D. C., under a contract to be made with Providence Hospital by the Surgeon General of the Army, the relief afforded was as follows:

Patients in hospital July 1, 1910	89
Admitted during the year	1,280
Total number treated	1,369
Average number admitted per month	114
Number remaining in hospital June 30, 1911	96
Total number of days' treatment afforded	35,124
Average number of days' treatment per patient	26
Average number of patients treated per day	96
Longest term of treatment (days)	365
Shortest term of treatment (days)	1
Number of patients in hospital during the whole year	3

LABORATORIES.

ARMY MEDICAL SCHOOL.

Before returning typhoid convalescents to duty it is the rule to examine their urine and feces for typhoid bacilli, and at least three negative examinations are considered necessary for the exclusion of both temporary and chronic bacillus carriers.

The Widal reaction is made with fluid serum in preference to dried blood, and if the quantity of serum furnished the laboratory be sufficient, the microscopic method is used. Blood for this purpose is collected in Wright's capsules, and since the issue of an illustrated circular on this method of securing blood specimens little or no difficulty has been encountered in obtaining a sufficient quantity of serum.

As it is possible to establish the diagnosis of typhoid fever at an earlier stage of the disease by blood cultures than by other clinical laboratory methods, bottles of sterile ox bile, in suitable mailing cases, are furnished, upon application, to all posts for this purpose.

The method of diagnosing fevers by blood cultures is not used as often in the service as it should be or as its prompt and decisive results warrant. The technic is not difficult and the diagnosis can be established in over 90 per cent of typhoid cases during the first week of the disease, a result obtainable in no other way.

In the absence of blood cultures it is sometimes possible to grow the typhoid bacillus from the small clot remaining in the collecting tube after the serum has been removed for a Widal reaction. This expedient was successful in 13 instances during the past year.

Several temporary carriers have been detected during the year.

Summary of laboratory work at the Army Medical School for year ending Dec. 31, 1910.

Examinations of typhoid cases	1,931
Widals:	
Negative	149
Positive	173
Blood cultures:	
Negative	30
Positive	4

Blood cultures from clots:	
Negative	166
Positive	13
Examination of feces for *B. typhosus:*	
Negative	703
Positive	21
Examinations of urine for *B. typhosus:*	
Negative	656
Positive	12
Examinations of human bile for *B. typhosus:* Positive	1
Examinations of feces for *B. paratyphosus A:* Positive	1
Examinations of feces for *B. dysenterica* type Y: Positive	2

Clinical laboratory examinations for year ending Dec. 31, 1910.

Blood counts	52
Differential counts	39
Malaria, examinations for	57
Urinalysis	312
Sputum, examinations of	49
Feces, examinations of	23
Bacteriological, of water	49
Blood cultures	7
Animal inoculations for diagnosis, immune sera, etc	210
Antogenous vaccines prepared	45
Widal examinations (microscopic method)	14
Histological examinations of operative and post-mortem tissues	203
Examinations for gonococcus	17
Gastric analyses	3
Examinations and treatments in the syphilitic clinic, examinations for the treponema pallidum by dark background illumination:	
Positive	15
Negative	13
By Levaditi's stain in tissues:	
Positive	5
Negative	0
Treatments of syphilis by salvarsan:	
By intravenous administration	55
By intramuscular administration	56
By subcutaneous administration	10

PROGRESS OF LABORATORY STUDIES IN SYPHILIS.

The spirochaetæ of syphilis and of yaws have been carried along in rabbits and are now in the eleventh generation. This source of supply has been very useful for teaching purposes and has also been used for investigations on the action of sodium cacodylate in syphilis, on the effect of salvarsan on the serum reaction, etc.

As the laboratory was supplied in October, 1910, with a stock of salvarsan from Prof. Ehrlich and as it has exceptional opportunities for the study of the treatment of syphilis in the way of making serum reactions and examining for spirochaetæ, an extensive line of work has been started and will be followed out during the coming year. Cases for treatment are furnished from the garrisons at Fort Myer, Washington Barracks, and other near by stations, and an arrangement has been made whereby most of the cases are to be treated at the Walter Reed Hospital. Considerable work had already been done on the various methods of administration. The intravenous method promises to be the method of choice, although the intramuscular method has given excellent results. Observations on the effect of salvarsan on tabes and paresis are also underway at the Government Hospital for the Insane.

Salvarsan therapy promises to be of great value in the Army both by reducing the time spent on sick report and by insuring proper treatment. Incidentally it may be mentioned that already two soldiers, who were infectious at time of discharge and therefore refused reenlistment, have been treated and in a few weeks reenlisted in good condition.

REPORT UPON WASSERMANN TESTS.

General results.—The tests made in this laboratory may be divided into the following three classes: Group I, cases in which the clinical diagnosis was syphilis or suspected syphilis, or in which there was a history of previous infection (this includes latent cases); Group II, cases in which clinical symptoms or diagnosis were of some other disease; Group III, normal individuals.

The total number of individuals examined to June 30, 1911, has been 2,435, while 1,515 repetitions of the test have been made as a guide to treatment, making a total of 3,950 tests. In addition to these several hundred tests have been made in research work upon the subject of complement fixation. It is believed that the value and accuracy of the technique employed is amply demonstrated by the results obtained in this large series of cases, especially as these results were controlled by repetitions of the test in over 500 patients who were placed upon treatment after the primary test.

Of the 2,435 individuals tested, 1,322 gave a positive reaction, and 1,113 a negative reaction. In the following pages the conventional signs + +, +, and + − are used to indicate varying degrees of inhibition of hæmolysis: Thus, + + indicates absolute inhibition, + indicates at least 50 per cent of inhibition, and + − any well-marked degree of inhibition below 50 per cent. A diagnosis of lues should not be based upon a + − reaction unless there is a clear clinical history of infection or the patient is on specific treatment.

The 2,435 cases were divided as follows: Group I, 1,661 cases; Group II, 618 cases; and Group III, 156 cases.

Group I. Cases in which the diagnosis was syphilis or suspected syphilis, etc.—Of this group of cases 1,661 were examined, of which 1,315, or 79.1 per cent, gave positive results. The cases were divided as regards the stage of the disease as shown in Table I.

TABLE I.—*Results of the complement fixation test in 1,661 cases of syphilis.*

Stage of the disease.	Number of cases.	Positive.	Negative.	Per cent positive.
Primary	293	219	74	74.7
Secondary	723	658	65	91.0
Tertiary	217	185	32	85.2
Latent	396	228	168	57.5
Congenital	19	17	2	89.4
Parasyphilis	13	8	5	62.3
Total	1,661	1,315	346	79.1

However, the above table is not a fair statement of the results actually obtained with the complement fixation test in our cases, for there were 53 individuals tested in the primary stage of the disease at a period too early for the reaction to have appeared, while in 37 of

the secondary cases giving a negative result vigorous specific treatment had been administered for weeks or months. Deducting these cases from the totals given in Table I, we have 1,571 cases in Group I, of which 1,315, or 83.7 per cent, gave a positive result. The cases were divided regarding the stage of the disease as shown in Table II.

TABLE II.—*Results of the complement fixation test after deducting cases mentioned in test.*

Stage of disease.	Number of cases.	Positive.	Negative.	Per cent positive.
Primary	240	219	21	91.2
Secondary	686	658	28	95.9
Tertiary	217	185	32	85.2
Latent	396	228	168	57.5
Congenital	19	17	2	89.4
Parasyphilitic	13	8	5	62.3
Total	1,571	1,315	256	83.7

Results in the primary stage: All cases have been considered as primary which have presented the initial lesion and which were tested before the development of secondary symptoms. Of this class of cases 293 were examined, of which 219, or 74.7 per cent, were positive. These figures, however, include 53 individuals who were tested within from two to four days of the appearance of the initial lesion, too early for the reaction to appear, and deducting these we have 240 cases, of which 219 were positive, or 91.2 per cent. The percentage of positive results in primary syphilis has varied from 38.6 per cent to 100 per cent, as given by various observers, and the results agree with those of the majority of observers who have used both the original Wassermann technique and the Noguchi modification. Some cases have never given a reaction in the primary stage, the reaction only appearing after the development of secondary symptoms.

Time of the appearance of the reaction: In 140 of the cases it has been possible to determine the date of the appearance of the positive reaction and Table IV gives the data in these cases. There have been a large number of cases which were tested within from a month to six weeks after the appearance of the initial lesion, but the cases here recorded are the only ones in which the date of the appearance of a positive reaction within approximate limits can be stated with certainty. The intensity of the reaction is also indicated in the table.

TABLE IV.—*Showing date of appearance of reaction in 140 cases of syphilis.*

Time after initial lesion.	Number of cases.	Character of reaction.			Time after initial lesion.	Number of cases.	Character of reaction.		
		++	+	+−			++	+	+−
5 days	6	2	8	1	17 days	3	3		
6 days	1			1	18 days	2	2		
7 days	4	3		1	19 days	2	2		
8 days	4	2	2		3 weeks	34	24	4	6
10 days	3	1	1	1	1 month	25	18	5	2
11 days	7	4	3		5 weeks	7	2	5	
13 days	4	3	1		6 weeks	16	9	5	2
2 weeks	8	6	1	1	7 weeks	2	1	1	
16 days	2	1	1		2 months	10	6	4	

Results in the secondary stage: There were 723 individuals examined during the secondary stage of lues of whom 658, or 91 per cent, gave a positive result. From these should be deducted 37 individuals who had received vigorous specific treatment for weeks or months and who were receiving treatment at the time the test was made. Deducting these cases, 686 individuals were tested in the secondary stage of syphilis, of whom 658, or 95.9 per cent, gave a positive result. It is evident that positive results are more frequent in the secondary than in the primary stage of syphilis, and the percentage of positive results agrees with that of the majority of observers. There have been a few cases presenting well-marked secondary lesions in which a positive result was not obtained, although repeated tests were made, and we think it must be admitted that occasionally a patient is encountered presenting severe primary, secondary, or even tertiary lesions in whom the Wassermann reaction remains negative.

Results in the tertiary stage: There were 217 individuals examined in this stage of the disease. Of these, 185, or 85.2 per cent, gave a positive reaction. Many of the patients examined had had more or less specific treatment, but these can not be eliminated, as so few would be left that the figures would have little value.

Results in latent syphilis: In this class of cases are included all those in which no active symptoms of syphilis were present at the time of the examination, but in which a clear history of infection was obtained. Almost all of these cases had received more or less specific treatment, and the majority were tested in order to determine whether the disease had been cured. Of this class, 296 individuals were examined, of whom 228, or 77 per cent, gave a positive result. In most of these cases the only evidence which existed of syphilis was general glandular enlargement, and in many even this symptom was absent. Our results are slightly higher in this class of cases than those given by the majority of observers, but the difference is slight, and indicates that in latent lues the technique recommended by Noguchi gives better results than that used in the original Wassermann test.

Congenital lues: Only 19 cases of congenital syphilis have been tested, of which 17, or 89.4 per cent, gave a positive result. The results are in agreement with those of the majority of observers, using either the original Wassermann technique or the Noguchi modification.

Results in parasyphilitic conditions: Ten patients suffering from tabes and 3 from paresis were tested, the total 13 giving 8 positive results, or 62.3 per cent. All the paretics gave a positive result and 5, or 50 per cent, of the patients suffering from tabes. Here again the results agree with those of observers who have used the original Wassermann technique.

Group II.—This group includes all cases in which the patient was suffering from some other disease than syphilis. Of this group 618 individuals were examined, of whom 7, or 1.1 of 1 per cent, were positive. Three of the positive results were obtained in patients suffering from tertian malarial fever, the blood being tested during the febrile stage, and in all the blood became negative after the subsidence of the fever. In the other cases, four in number, three were diagnosed as pulmonary tuberculosis and one as "undetermined fever." The three cases diagnosed as tuberculosis gave strong reactions and recovered under specific treatment. In two of these a history of syphilitic infection was afterwards obtained, while in the other such an infection could

not be excluded. In the case diagnosed as "undetermined fever" the exact nature of the disease could not be learned, but it was probably malarial fever.

Group III.—The blood of 156 individuals in good health and in whom luetic infection could be excluded was tested and a negative result was obtained in every instance.

The test as a control of treatment: In a very large number of cases the test has been used as a control of treatment both with mercury and with arsenobenzol (salvarsan). The results demonstrate the very great value of the test as an index of the efficacy of treatment, especially of treatment with arsenobenzol. At the present writing tests are being made upon over 600 patients who have been treated with this drug, the blood being tested every month in the majority of the cases. It has been possible to trace the gradual disappearance of the reaction in treated cases, and in a certain proportion its gradual reappearance before a clinical relapse occurred. The data derived from the test has made possible the intelligent use of this drug and of mercury in the treatment of both initial infections and relapses.

The relation of certain bacteria to the results of the test: In recent experiments Capt. Craig has demonstrated that certain strains of staphylococci and streptococci, when growing in normal serum, under favorable conditions, are capable of producing certain substances in the serum which cause a positive result with the complement fixation test for syphilis. In order that this may occur the bacteria must develop in the serum at incubator temperature for a least 24 hours or at room temperature for from 5 to 7 days. In addition, every strain of a certain bacterial species will not produce this result, as was shown by the fact that while a double-plus reaction occurred in normal serum infected with a stock *S. aureus* and with an *S. aureus* isolated from a normal serum giving a positive reaction, a negative result was obtained with another *S. aureus* isolated from a serum giving a negative reaction.

These nonspecific reactions do not occur in normal sera which are sterile, even though the sera be kept at room temperature for as long a period as one month. Such reactions are in all probability very rare in practice, but the fact that they can occur as a result of bacterial activity is of enough importance to justify the use of aseptic methods in the collection of blood for the Wassermann test. In two sera which gave a negative reaction on the first test infection with a streptococcus caused the reaction to become positive a week later, and in the only instance that has been observed in which a presumably normal serum, on the first test, gave a positive reaction, bacterial contamination was probably the cause.

The effect of the ingestion of alcohol upon the results of the test: Capts. Craig and Nichols have demonstrated that the ingestion of considerable amounts of alcohol will render a positive serum negative if it be tested within 24 hours after alcohol had been administered, and in some cases the serum will give a negative reaction 3 days after the administration of this drug. They tested nine individuals, all of whom gave a double-plus complement fixation test, administering quantities of alcohol varying from 90 to 120 cubic centimeters in the form of beer and whisky, and found that in every case the positive reaction disappeared within 24 hours after the administration of the drug and that in one case it did not become positive again until the

end of 3 days, while in the others the serum again became positive within 36 hours.

These observations have demonstrated that no dependence can be placed in a negative Wassermann reaction in individuals who have, within 24 hours of the collection of the blood, ingested a considerable amount of alcohol, while in some instances the drug may render the reaction negative for as long a period as 3 days. All of the tests were made upon individuals giving absolute inhibition of hæmolysis, and it is probable that the drug will be found to have a still more decisive effect upon weaker reactions, even though given in much smaller quantities. Experiments are now under way to determine the smallest amount of alcohol which will render the test negative and the effect of the drug upon cases giving a plus or a plus-minus reaction. In view of the effect of alcohol upon the complement fixation test a careful inquiry should always be made regarding the recent use of this drug before collecting blood for the complement fixation test.

LABORATORY, GENERAL HOSPITAL, SAN FRANCISCO, CAL.

In the semiannual report for the period ending June 30, 1910, the following remarks are made in regard to the Wassermann reaction:

The most important and difficult new work undertaken has been the making of Wassermann reactions in all cases of suspected syphilis. This was begun in March and has been continued with very satisfactory results. The original Wassermann test is used in preference to its modifications. The technique is somewhat laborious, but the results seem to justify it. * * *

The test has now been made in 96 cases, of which 36 gave positive reactions and 60 negative ones. Every case in which the reaction was positive is also now considered syphilitic by the ward surgeons on other grounds. Of the cases in which a negative reaction has been obtained, a diagnosis other than syphilis has been made in all but 9 cases, and in these cases the negative reaction is usually explainable.

In five cases in which syphilis was well known to exist the patients had all taken treatment for from six months to two years.

In one case where syphilis is suspected the patient came in with a macular eruption and general lymphadenitis of slight degree. There was a history of chancroid a month before, and a diagnosis of syphilis was therefore made and treatment begun. Twenty days after admission an additional diagnosis of scabies was made and sulphur ointment used. The patient was discharged free from all lesions 49 days after admission, and without having had other lesions than those mentioned. There is a possibility that the scabies may have caused all the trouble in this case. Another case is that of a man who had a sore on his penis a month before applying for treatment for iritis. No other symptoms have shown, but antisyphilitic treatment was instituted. There is some room for doubt in this case also. Two cases of supposedly primary syphilis have given negative reactions so recently that a positive diagnosis can not be made on purely clinical grounds. These cases are therefore being held for further observation, and the developments will be watched with interest.

Record of examinations made in the bacteriological, pathological, and chemical laboratories from Jan. 1 to Dec. 31, 1910.

Blood examinations:		
Counts	949	
Malaria	412	
		1,361
Urine examinations		3,263
Sputum		1,282
Feces		528
Pus		641
Cultures		512
Skin scraping		20
Tissue		102
Fluids obtained by aspiration		19

Sera for treponema pallida		70
Sera for lues (Wassermann)		345
Stomach contents		81
Water analyses:		
Chemical	47	
Bacteriological	151	
		198
Malt extract, analyses for alcohol content		14
Milk analyses		54
Guinea pig inoculations		23
Vaccines prepared		20
Autopsies		27
Miscellaneous examinations		32

Examination of typhoid specimens.

FOR DIAGNOSTIC PURPOSES.

	Negative.	Positive.	Total.
Feces	32	1	33
Urine	28	2	30
Widals	47	[1] 7	54
Blood cultures	31	1	32
Total	138	11	149

[1] Two positive for paratyphoid A.

FOR DETECTION OF CARRIERS.

Feces	78	25	103
Urine	87	4	91
Widals	3	2	5
Blood cultures	3	0	3
Total	171	31	202

ANTITYPHOID VACCINATIONS.

Complete vaccinations	130
Incomplete vaccinations	23
Undergoing vaccination	31
Tuberculin tests administered	81

LABORATORY, FORT LEAVENWORTH, KANS.

This was designated by the circular letter of January 30, 1909, as one of the general laboratories. The following from the report is of interest:

Treatment of carrier with vaccine.—An interesting case in connection with antityphoid vaccination was the prompt reaction to the inoculation of a patient who for a time threatened to become a carrier. This man had an ordinary case of typhoid fever, and had been in the hospital about six weeks. At the end of this time he was transferred to this hospital, apparently cured, but still excreting typhoid bacilli in urine and feces, in spite of continued medicinal treatment. He was then given three inoculations of antityphoid vaccine, 0.5, 1, and 1 cubic centimeters, respectively, at 10 day intervals. The bacilli disappeared from the feces one week after the second inoculation, and four subsequent examinations, at weekly intervals, gave uniformly negative results.

* * * * * * *

New laboratory.—The increasing amount of work required of this laboratory has necessitated its removal to more commodious and better lighted quarters. Heretofore the laboratory has been located in three small rooms on the second floor of the hospital with eastern exposure, and in close proximity to the building used as the venereal ward of the hospital. In addition to the disadvantage of insufficient working space, this location made it impossible to secure sufficient light for microscopical purposes.

On account of its availability in location and construction, building 56 was selected for laboratory use. The laboratory is now in process of removal to its new quarters in that building. A portion of this building was originally constructed for use as a laboratory. The building has three rooms on the second floor, which will be used as an office, a bacteriological and a pathological laboratory, and three rooms on the first floor, which will be used as a chemical laboratory, a room for making and sterilizing media, and a room for keeping the animals for laboratory experiments. The rooms, while not large, are admirably suited for laboratory purposes, and we believe this change of quarters will be of great value in increasing the working capacity and efficiency of the laboratory.

* * * * * * *

Summary of laboratory work at Fort Leavenworth, Kans., from Jan. 1 to Dec. 31, 1910.

Clinical laboratory examinations:	
Red blood cell and leucocyte counts	60
Differential counts	20
Examinations for malaria	302
Positive (56 men)	75
Negative	227
Urine analyses	550
Examinations of feces (microscopical)	67
Examinations of sputum	111
Examinations of cultures, blood, pus, etc	33
Examinations of stomach contents	6
Examinations of water	62
Chemical analyses	8
Bacteriological analyses	54
Autopsies	6
Examinations of pathological specimens	8
Miscellaneous	5
Vaccinations	1,410
Antityphoid vaccinations (1,117 men)	1,387
Antistaphylococcus vaccinations	20
Smallpox vaccinations	3
Typhoid fever:	
Total examinations in typhoid cases	507
Suspected typhoid carriers	14
No typhoid bacilli found	14
Typhoid bacilli found	0
Widal examinations	121
Positive	52
Negative	69
Blood cultures	3
Positive	1
Negative	2
Cultures from clot	16
Positive	3
Negative	13
Examinations of milk	10
Chemical analyses	9
Bacteriological analyses	1
Feces from convalescents, typhoid	168
Positive	13
Negative	155
Urine from convalescents	171
Positive	3
Negative	168

MEDICAL DEPARTMENT.

The Medical Department consists of the Medical Corps, the Medical Reserve Corps, the Dental Corps, the Army Nurse Corps, and the Hospital Corps.

MEDICAL CORPS.

Authorized strength, June 30, 1910	424
Increase Jan. 1, 1911, by act of Apr. 23, 1908	21
Authorized strength, June 30, 1911	445
In service June 30, 1910	345
Appointed during year	50
	395
Losses during year	14
In service June 30, 1911	381

On October 1, 1910, 64 candidates who had passed the preliminary examination for appointment in the Medical Corps reported in Washington to take the course of instruction at the Army Medical School. Forty-nine students successfully completed the course of instruction at the school and were graduated March 20, 1911. Forty-seven of the graduates were recommended for appointment in the Medical Corps of the Army. One reserve officer who graduated from the school did not pass the physical examination on account of temporary physical disabilities, but he was sent to the Walter Reed Hospital for careful observation, and at the expiration of three months was commissioned in the Medical Corps of the Army.

Losses during the fiscal year.

	Brigadier Generals.	Colonels.	Lieutenant Colonels.	Majors.	Captains.	First Lieutenants.	Total.
Retired		4		2	1		7
Resigned					1	1	2
Discharged					4		4
Died						1	1
Aggregate		4		2	6	2	14

The death was Robert Henry Gantt, June 10, 1911.

PROMOTIONS DURING THE FISCAL YEAR 1910–11.

The following promotions were made: Four lieutenant colonels to be colonels; 7 majors to be lieutenant colonels; 12 captains to be majors; 10 lieutenants to be captains.

The profession throughout the United States is still taking a commendable interest in the Medical Corps of the Army, and during the year the department has experienced no difficulty in obtaining desirable candidates to take the preliminary examination for the corps. Since November, 1910, the department has required that in order to be eligible to take the examination a candidate must have had at least one year's experience as interne in a hospital after graduation. This requirement has made the classes that have taken the preliminary examination a great deal smaller, but owing to the better preparation of the candidates a greater proportion of the men who have reported for this examination have been found qualified.

The department has continued to hold preliminary examinations for appointment in the corps the second Monday in each month at San Francisco, Fort Sheridan, and Washington, D. C. During the fiscal year ending June 30, 1911, 50 applicants successfully passed the preliminary examinations. Of this number 31 attended the session of the Army Medical School which ended March 20, 1911, leaving 19 who will attend the next session of the school. A preliminary examination will be held on July 10, 1911, at various Army posts throughout the United States, to which 59 candidates will be invited to appear. The last examination before the opening of the school will be held on Tuesday, September 5, 1911, and a goodly number of applicants have already signified their intention of taking the examination at this time.

During the year two officers have tendered their resignations as officers of the Medical Corps.

The officers of the Medical Reserve Corps (inactive list) continue to manifest great interest in the Medical Department. When troops were sent to the Mexican border a great many of them applied for service in the field, and a number of applications have been received for duty at maneuver camps. I consider it of the greatest importance that officers of the Medical Reserve Corps should be called into active service for duty with troops in the field so that they can become familiar with the duties that officers of the Medical Department are called on to perform. The profession in civil life is just as well qualified to treat the medical and surgical disabilities incident to the military service as are the officers of the Medical Department, but they can never become familiar with the many special duties required of medical officers except by practical experience with troops.

On January 1, 1911, the increase authorized by the bill reorganizing the Medical Department, approved April 23, 1908, was completed except the filling of the lowest grade by the promotion of three majors to lieutenant colonels and six captains to the grade of major. The strength of the corps as now authorized is 15 colonels (one being an extra number), 24 lieutenant colonels, 105 majors, and 300 captains or lieutenants. The method of conducting the examination for promotion authorized by this bill continues to prove an unqualified success. During the fiscal year ending June 30, 1911, four captains were honorably discharged from the service of the United States, having failed to qualify in their examination for promotion to the grade of major. One major who had failed to qualify for promotion to the grade of lieutenant colonel during the fiscal year ending June 30, 1910, was found upon examination to be professionally disqualified for promotion and was retired without promotion. One major who had previously failed to qualify for promotion to the grade of lieutenant colonel was found qualified on reexamination and was advanced to the grade of lieutenant colonel when a vacancy occurred.

MEDICAL RESERVE CORPS.

On roster June 30, 1910		421
Appointed during the year		573
		994
Losses:		
Retired	1	
Resigned	10	
Discharged	9	
Died	3	
Commissions vacated	49	
		72
On roster June 30, 1911		922

The deaths were Oscar F. Davis, January 30, 1911 (active list); J. V. Shoemaker, October 11, 1910 (inactive list); and Paul A. Adams, July 3, 1910 (active list).

Of the 922 on the roster June 30, 1911, 138 were on active duty and 784 on the inactive list.

On active duty June 30, 1910		175
Ordered to active duty during the year		49
		224
Retired (special act of Congress)	1	
Relieved from active duty	19	
Commissions vacated	49	
Honorably discharged	8	
Resigned	7	
Died	2	
		86
On active duty June 30, 1911		138

When the troops were mobilized on the Mexican border a great many medical men, who had formerly served as officers of Volunteers and contract surgeons desired appointment in the Medical Corps of the Army. I then decided to recommend for appointment in the Medical Reserve Corps all former volunteer surgeons and contract surgeons who had served, with good record, for more than six months and who are now less than 45 years old. Practically all the former service men who were offered commissions in the Medical Reserve Corps under the conditions mentioned above were very glad to accept appointment with the understanding that they would come into active service in case they were needed.

CONTRACT SURGEONS.

In service June 30, 1910		13
Contracts made during the year		27
		40
Contracts annulled during the year		25
Died		2
		27
Contracts in force June 30, 1911		13

The deaths were William H. Ramsey, January 14, 1911, and George C. Craig, March 12, 1911.

Of these 13 contracts, 6 are temporary and 7 are on duty at arsenals, headquarters of military departments, and remount depots at pay ranging from $75 to $150 per month.

DENTAL SURGEONS.

During the last days of the Sixty-first Congress a bill to place the Dental Corps of the Army on a commissioned status was attached to the Army appropriation bill and passed by the Senate. In conference this bill was so amended as to organize the Dental Corps to be attached to the Medical Department of the Army, composed of dental surgeons and acting dental surgeons. The number of dental surgeons was limited by law to 60, but acting dental surgeons can be employed in such numbers that the dental surgeons and the acting dental surgeons together will not exceed 1 to each 1,000 enlisted strength of the Army. After an acting dental surgeon has served as such for a period of three years he may be appointed a first lieutenant and dental surgeon, provided he passes the professional examination to be prescribed by the honorable the Secretary of War. An acting dental surgeon has the same official status, pay, and allowances as the contract dental surgeons authorized by the act approved February 2, 1901. A dental surgeon has the rank of first lieutenant in the dental corps and has all the rights of officers of that grade, except that their right to command is limited to the Dental Corps of the Army. It is believed that this legislation has placed the Dental Corps on a satisfactory basis and that hereafter the department will experience no difficulty in furnishing first-class dental service to the Army. The bill authorizing the Dental Corps also authorized the Secretary of War to appoint in the regular establishment all the contract dental surgeons then in the service. Thirty of the 31 contract dental surgeons were commissioned dental surgeons with the rank of first lieutenant. One contract dental surgeon was found physically disqualified for appointment. First Lieut. John S. Marshall, dental surgeon, was over 64 years of age when commissioned in the Dental Corps and was placed on the retired list June 17, 1911. Twenty-nine commissioned dental surgeons were in service on June 30, 1911.

CONTRACT DENTAL SURGEONS.

Contracts authorized and in service June 30, 1910	31
Contracts made	2
	33
Died	1
Contracts annulled	1
Contracts vacated by appointment as dental surgeon	30
	32
Contract in force June 30, 1911	1

The death was Jean C. Whinnery, July 29, 1910.

The contract dental surgeon remaining in service on June 30, 1911, will be continued on duty as acting dental surgeon.

An examination will be held during the summer to enable candidates to qualify for appointment as acting dental surgeons.

ARMY NURSE CORPS.

A tour of inspection was made by the superintendent of the Army Nurse Corps during the summer of 1910. This tour included all the hospitals where members of the Nurse Corps are stationed, both in

the United States and the Philippine Islands, thus bringing this office more closely in touch with the special needs of the service. This personal knowledge and interest in the individual has, I believe, done much to develop an esprit de corps among the nurses themselves and has made possible an improvement of conditions, both in the nurses' quarters and hospitals.

Provision has been made for the laundering of the nurses' uniforms. In view of the fact that the members of the Nurse Corps have never been able to subsist on the commutation of rations allowed, namely, 30 cents a day, I recommended that this amount be increased to 75 cents a day. An increase of 40 cents was allowed, which, while insufficient, is a decided improvement.

New quarters for nurses have been built at Fort Bayard, N. Mex., and have proved to be most comfortable and satisfactory. Each room opens on a porch, thus providing ample facilities for sleeping out of doors. Quite an extensive addition has been made to the nurses' quarters at the general hospital, Presidio of San Francisco, Cal., giving them more bedrooms, a dining room, and living room.

It has long been my intention to assign members of the Nurse Corps to the Walter Reed General Hospital, Takoma Park, D. C., but have been prevented by the lack of suitable quarters. During the past year an appropriation was made for the erection of an adequate building, which was fully equipped and ready for occupancy June 21, 1911, when the first nurses were assigned to this station. All newly appointed nurses will, as far as possible, be sent to this hospital, not only for instruction in the duties peculiar to military nursing, but to test their fitness for the service before sending them to more distant stations.

The appropriation for the year provides for 25 additional nurses, making it possible to assign them to the Army and Navy General Hospital, Hot Springs, Ark.; base hospital, Fort Sam Houston, Tex.; Walter Reed General Hospital, Takoma Park, D. C.; and the attending surgeon's office, Washington, D. C.

Soon after the organization of the Army Nurse Corps in 1901 an effort was made to secure a reserve of nurses for service in time of war, but no great progress was made owing to the lack of a proper organization through which to work.

Through the affiliation and cooperation of the American Red Cross and the Nurses' Associated Alumnæ of the United States, of which the superintendent of the Army Nurse Corps was president, necessary committees were formed and the work of enrolling Red Cross nurses undertaken. Much interest was evinced and a most gratifying result came from all sections of the country. Over 2,000 carefully selected trained nurses are already pledged for service in the event of war, and no diminution either in interest or number of applications for enrollment as Red Cross nurses is evident.

During the recent maneuvers in Texas nurses were needed for the division hospital, and six Red Cross nurses were selected for this duty, serving under the direction of a member of the Nurse Corps acting as chief nurse. This arrangement proved most satisfactory and gives assurance that the reserve furnished by the Red Cross will enable the present organization to be equal to any need which may arise.

The general health of the nurses has been excellent, there having been no case of serious illness among the members of the corps during the past two years.

The qualifications for admission to the service have been raised, but in spite of this fact there has been an increase in the number of applications. There have been during the fiscal year 545 applications for admission to the Army Nurse Corps. There have been during the same period 22 discharges, 20 new appointments, and 2 reappointments.

Nurses are assigned to the following stations: Army General Hospital, San Francisco, Cal.; Army General Hospital, Fort Bayard, N. Mex.; Army and Navy General Hospital, Hot Springs, Ark.; base hospital, San Antonio, Tex.; Walter Reed General Hospital, Takoma Park, D. C.; attending surgeon's office, Washington, D. C.; division hospital, Manila, P. I.; Zamboanga, Mindanao, P. I.

HOSPITAL CORPS.

The authorized strength is as follows:

Sergeants, first class	300
Sergeants	350
Corporals	50
Privates	2,800
Total	3,500

Strength, June 30, 1910:

Sergeants, first class	274
Sergeants	339
Corporals	44
Acting cooks	189
Privates, first class	1,295
Privates	1,267
Total	3,408

Gain, July 1, 1910, to June 30, 1911:

By enlistment and reenlistment	939
By transfer	844
Return from desertion	76

Loss during same period:

By discharge by expiration of term of service	1,242
By discharge by order	190
By discharge, sentence general court martial	83
By discharge, surgeon's certificate disability	59
By transfer to the line	37
By retirement	26
By death due to disease	14
Suicide	1
Deserted	162

In service, June 30, 1911:

Sergeants, first class	285
Sergeants	333
Corporals	40
Acting cooks	195
Privates, first class	1,270
Privates	1,330
Total	3,453

The vacancies in the grade of sergeant, first class, which occurred during the fiscal year were filled from the eligible list of candidates who passed the examination in February, 1910, the needs of the service being always taken into consideration in recommending new appointments.

Frequent examinations were held in the different military departments for promotion to the grade of sergeant and 49 approved candidates were appointed to that grade.

The addition of corporals to the noncommissioned officers of this corps has proved very satisfactory, as a number of valuable men have not alone been promoted, but also saved to the service, who otherwise would not have been able to pass a competitive examination to the higher grade and would probably have left the corps for service in the line where the opportunities for advancement are now much greater than in the Hospital Corps.

The vacancies in the grade of private were as usual filled by transfer at the recruiting depots of unassigned recruits to the Hospital Corps companies and by acceptances at the recruiting stations of men who had previous service in the Army, and by a small proportion of men who had no previous service.

During the year the vaccination of recruits for the Army was transferred from the recruiting stations to the general recruit depots and the assignment of Hospital Corps privates, first class, to duty at recruiting stations as vaccinators and to render first aid was discontinued.

The strength of the Hospital Corps (3,500) as now authorized is considerably less than the needs of the service require, and to secure a fair distribution of the men the 8 per cent reduction of the Army Regulation quota for the different military departments had to be maintained during the entire fiscal year. Many appeals from post surgeons for the proper regulation allowance, approved by post and by department commanders, were received, but this office, though recognizing the justice and urgency of these cases was unable to afford the desired relief on account of the stringent and explicit orders not to go beyond the authorized allowance of Hospital Corps men for the Army. This deficiency was still more felt when the troops were sent in the field to Texas in March and April, 1911, when it became necessary to deplete the posts to the lowest possible minimum, and even to the point of causing temporary inefficiency in the administration of post hospitals. Even with this depletion of all the posts in the United States, the Maneuver Division lacked 127 of having enough Hospital Corps men to fill up its sanitary units and regimental and other quotas. If a second division had been concentrated the deficiency would have been 85 per cent and would have compelled each division to take the field with only one-half of the sanitary units called for by the Field Service Regulations and with reduced regimental quotas. The recommendation of July 13, 1910, that the Hospital Corps be increased to 4,000 is again urgently renewed. A less number is insufficient for the peace needs of the Army and cripples mobilization for war.

In my opinion there is urgent need for the readjustment of the rank of the noncommissioned officers and for an increase in pay for both the noncommissioned officers and privates of the Hospital Corps. There is no question but that service in the Hospital Corps

is not as attractive since the pay bill of 1908, as it was before. This bill made service for the enlisted men in the line and other staff departments much more attractive than it had been previously, while it did not increase the pay of the privates, first class, and privates of the Hospital Corps, and gave only a small increase for noncommissioned officers as compared with other noncommissioned officers of the Army. It is a well-known fact that promotion is much easier to obtain in the line of the Army than it is in the Hospital Corps, where advancement is only secured by passing a rigid examination. In addition to this there are many ways in the line of the Army by which a man who is attentive to duty can increase his monthly pay from $2 to $9 per month. There is not the same opportunity for advancement for a Hospital Corps man in time of war, which is a matter to be considered as seriously influencing ambitious and intelligent men who may be thinking of enlisting. It should also be considered that the duties of members of the Hospital Corps are not particularly attractive to the great mass of enlisted men. The present organization of the Hospital Corps does not give advanced promotion for particularly worthy and deserving noncommissioned officers as provided for in other branches of the service and in the Navy. It is urgently recommended that the grade of sergeant major be established for the Hospital Corps with the flat pay of $75 per month and the usual increase for service, as is now allowed the sergeants, first class. This could be done without adding to the expense of the Hospital Corps by reducing the number of sergeants, first class, to 250 and allowing 30 sergeant majors with the pay above mentioned. The number of senior noncommissioned officers can be reduced to 280 in view of the number of posts that have been abandoned since Congress allowed 300 sergeants, first class. Without considering the advisability for an advanced grade for worthy noncommissioned officers, there is a demand on the score of efficiency for this grade in our general hospitals, brigade posts, ambulance companies, and field hospitals where several sergeants, first class, are assigned in the same command.

I therefore recommend that the number of men allowed the Hospital Corps be increased to 4,000; that action be taken to increase the pay of the members of the Hospital Corps; and that the organization be as follows: Sergeant majors, 30, at $75 per month; sergeants, first class, 250, at $65 per month; sergeants, 400, at $36 per month; corporals, 120, at $24 per month; privates, first class, 2,400, at $21 per month; and privates, 800, at $16 per month.

It has been perfectly apparent for some years that our companies of instruction, Hospital Corps, should be abandoned and field hospitals and ambulance companies organized in their stead. Every time a company of instruction went into the field it had to go through the process of organizing into field units before it could proceed with its work. On the 7th of April a recommendation to this effect was made to The Adjutant General of the Army, and by indorsement from The Adjutant General of the Army, dated April 17, authority was given to abolish all companies of instruction, Hospital Corps, and for the organization of Companies A, B, C, and D into the field hospitals and Ambulance Companies Nos 1, 2, 3, and 4, respectively. This it is believed is a great step in advance in the organization of the Medical Department.

It is my desire to organize field hospitals and ambulance companies at brigade posts just as rapidly as men become available for this duty. If the 500 additional men are allowed the Hospital Corps, as recommended above, it is believed two additional field hospitals and ambulance companies can be organized during the year commencing July 1, 1912.

During the spring and summer of 1910 the Hospital Corps companies were again divided into halves and attended the camps of instruction for the Organized Militia and functions at Chicago, Ill., Nashville, Tenn., Des Moines, Iowa; Company A at Chicago, Ill., Sparta, Wis., and the target and maneuver reservation at Fort D. A. Russell, Wyo., also the maneuvers at Fort Riley, Kans.; Company B at Leon Springs, Tex., Atascadero, Cal., and American Lake, Wash.; Company C at Nashville, Tenn., Chickamauga Park, Ga., Gettysburg, Pa., Pine Camp, N. Y., camp at Fort Benjamin Harrison, Ind., also the national matches at Camp Perry, Ohio.

ARMY MEDICAL SCHOOL.

[President, Col. Louis A. La Garde, Medical Corps, United States Army; secretary, Maj. C. R. Darnall, Medical Corps, United States Army.]

The fifteenth session of the school began October 1, 1910, and closed March 20, 1911.

The number of accepted candidates appointed in the Medical Reserve Corps and admitted to the school was 62.

The number completing the course and qualifying in final examinations was 49.

The number commissioned in the Medical Corps was 47.

Nine candidates failed to pass the midterm examination and were relieved from duty at the school January 31, 1911.

Four resigned during the school course.

One was not recommended for appointment in the Medical Corps.

Recapitulation: Resigned, 4; failed in midterm examination, 9; graduated, 49; total, 62.

No officers of the Organized Militia attended the school.

The following table shows the subjects taught, the number of hours for each, and the instructors:

No.	Hours of instruction.	Subject.	Instructor.	Max.	Min.
1	84	Medical department administration; duties of medical officers and customs of the service.	Maj. C. R. Reynolds	1,000	800
2	189	Clinical microscopy and bacteriology	Maj. F. F. Russell, Capt. C. F. Craig, Capt. H. J. Nichols.	900	720
3	19	Military hygiene	Maj. F. A. Winter	800	640
4	19	Military surgery	Col. L. A. La Garde	800	640
5	20	Military medicine and tropical medicine	Lieut. Col. W. D. McCaw	800	640
6	126	Sanitary chemistry	Maj. C. R. Darnall	600	480
7	40	Hospital Corps drill	Capt. W. A. Wickline	500	400
8	23	Operative surgery	Capt. H. F. Pipes	400	320
9	42	Ophthalmology and optometry	Lieut. Col. W. D. Crosby, Capt. W. T. Davis.	400	320
10	8	Roentgen-ray work	Capt. H. F. Pipes	300	240

In addition to the above, the following instruction was given:

A series of six lectures on military law by Brig. Gen. George B. Davis, Judge Advocate General of the Army, and Lieut. Col. J. B. Porter.

Twenty hours in equitation at Fort Meyer, Va.

A series of 12 lectures and clinical instruction periods in psychiatrics at the Government Hospital for the Insane by Dr. J. S. White and Capt. L. L. Smith, Medical Corps.

A lecture and demonstration of instruments for cranial surgery by Dr. William H. Hudson, of Atlanta, Ga.

The final examination ended on March 14, 1911. The marks obtained in each subject and the final aggregate are shown in the merit roll below.

The closing exercises were held in the lecture room of the school. The honorable the Secretary of War distributed the diplomas.

The Hoff memorial medal was awarded to First Lieut. Henry P. Carter, Medical Reserve Corps, United States Army.

The school was closed before the end of the term on account of the concentration of a maneuver division on the Mexican border. The field conditions there were considered of more value to the students than the few remaining weeks of instruction at the school, and their services were necessary with the mobile Army.

The school has been moved since the last annual report from the Army Medical Museum Building, where it had been located since its beginning in 1893, to 721 Thirteenth Street NW. The building has six stories and the school occupies the five upper floors, as follows:

The second floor has a large lecture hall in the rear of the building, away from the noise of the street, which will accommodate an audience of 150. The four rooms fronting on Thirteenth Street are used for the library, offices of the president, secretary, and the clerks of the school.

The third floor has a large back room containing tables and accommodations for 60 students in chemistry. The rooms fronting on Thirteenth Street are used for one small working laboratory, a faculty room, and two storerooms.

The fourth floor is almost entirely devoted to the bacteriological department.

The fifth floor is used for offices for the instructors in bacteriology and pathology.

The sixth floor contains the X-ray department, operating room, and photographic department.

Instruction was given in the chemical laboratory from the opening of the school in October, 1910, until the end of the session in March, 1911. The course covered preliminary work in qualitative analysis, a short course in general quantitative analysis, gravimetric and volumetric, and the usual laboratory work covering analysis of stomach contents, water analysis, and analysis of urine. The early closing of the school made it necessary to curtail the course given in former years.

The students as a class did very well, rather better than the average. This was due no doubt to the improved laboratory facilities afforded them.

In the department of bacteriology and clinical microscopy it is now possible, with the additional room provided in the new building, to teach the entire class at the same time and not in sections as was necessary in the small rooms allotted to our use in the Army Medical Museum. Instruction was given from 9 to 12 a. m. on Mondays, Wednesdays, and Fridays throughout the year.

The teaching staff was increased by the assignment of Capt. Henry J. Nichols, Medical Corps, as second assistant, the first assistant being Capt. Charles F. Craig.

The arrangement of the new laboratories is such that each student has a well-lighted worktable and a complete equipment of everything necessary for the character of the work required. The usual subjects were covered during the first half of the year, but because of the early closing of the school the work of the last two months of the course had to be curtailed. Special attention was paid to the subject of the bacteriological and serum diagnosis of the infectious diseases, particularly to typhoid fever, dysentery, cholera, and diphtheria. The course in cholera diagnosis is quite elaborate and corresponds very closely to that given in the special cholera courses on the Continent of Europe.

The work on bacterial vaccines, syphilis, and yaws this year was limited because of lack of time.

The laboratory is now equipped for 60 students working at the same time, but that number could be slightly increased by making a few changes in the arrangement of worktables.

Considerable clinical material, such as malarial blood, intestinal parasites, and tissues obtained at operation and at the autopsy table, has been contributed by graduates of the school, and it is hoped that such donations will be continued.

Relative proficiency of the student officers at the Army Medical School, session 1910–11.

First lieutenants, Medical Reserve Corps.	Final rating.	Aggregate. (Maximum 7,000; minimum, 5,600.)	Remarks.
Herman N. Bundesen	42	5,873	
Fred R. Burnside	35	5,938	
William T. Cade, jr.	46	5,827	
Henry P. Carter	1	6,340	Proficient with honor (medalist).
Frank N. Chilton	6	6,219	
Albert P. Clark	23	6,066	
Howard Clarke	8	6,196	
John S. Coulter	2	6,291	
Samuel S. Creighton	12	6,162	
William Denton	32	5,959	
George G. Divins	44	5,866	
Lauren S. Eckels	18	6,097	
Thomas J. Flynn	17	6,098	
Harry G. Ford	22	6,079	
Frederick H. Foucar	3	6,282	
Sanford W. French	41	5,874	
Robert H. Gantt	40	5,895	
Paul W. Gibson	13	6,157	
Harley J. Hallett	21	6,080	
Josiah H. Holland	37	5,925	
Leonard S. Hughes	4	6,269	
Burt R. Huntington	47	5,824	
James F. Johnston	15	6,145	
Lloyd A. Kefauver	30	5,988	
George B. Lake	5	6,242	
Charles E. McBrayer	31	5,976	
Robert C. McDonald	19	6,093	
John R. McKnight	43	5,873	
Clemens W. McMillan	25	6,057	

Relative proficiency of the student officers at the Army Medical School, session 1910–11—Continued.

First lieutenants, Medical Reserve Corps.	Final rating.	Aggregate. (Maximum 7.000; minimum,5,600.)	Remarks.
Henry C. Maddux	45	5,834	
Daniel F. Maguire	16	6,115	
Henry Clay Michie, jr	33	5,958	
Raymond William Mills	18	6,097	
Leo C. Mudd	11	6,172	
Eugene G. Northington	9	6,184	
George E. Pariseau	20	6,081	
John J. Reddy	28	6,023	
Edward C. Register	7	6,216	
Horace M. Roberson	27	6,027	
James L. Robinson	24	6,061	
Herbert H. Sharpe	38	5,919	
Joseph L. Siner	36	5,931	
Francis X. Strong	10	6,176	
Alleyne von Schrader	34	5,950	
Joseph O. Walkup	29	5,992	
Jay D. Whitham	14	6,149	
John M. Willis	48	5,716	
Robert H. Hetrick	26	6,028	
Edgar D. Craft	39	5,915	

CONSTRUCTION AND REPAIR OF HOSPITALS.

During the past year plans and specifications were prepared in this office for new hospitals to be erected at the recruit depot, Angel Island, Cal., Fort Missoula, Mont., Fort H. G. Wright, N. Y.; also for isolation hospitals to be erected at the general hospital, San Francisco, Cal., Fort Monroe, Va., Fort Sheridan, Ill., Fort Sam Houston, Tex.; for a nurses' home and a mortuary for the Walter Reed Army General Hospital, D. C., for additions to the hospitals at Fort Monroe, Va., Fort George Wright, Wash., Fort Strong, Mass., Fort Screven, Ga., Fort Totten, N. Y., Fort Sheridan, Ill., Fort Andrews, Mass., Fort Dupont, Del.; for an officers' ward for the Army general hospital, San Francisco, Cal.; for enlarging the boiler house at the Army and Navy general hospital, Hot Springs, Ark.; and for a central dispensary for Fort Winfield Scott, Cal.

Contracts were entered into for the new hospitals, including the isolation hospitals, for all the additions, except the one for the hospital at Fort Strong, Mass., the proposals in this case being considered unreasonable; also for the officers' ward, General Hospital, San Francisco, Cal.; for the nurses' home and mortuary at the Walter Reed General Hospital; for enlarging the boiler house at the Army and Navy General Hospital; and for solariums for the Army General Hospital, San Francisco, Cal. Some of the above work has been completed and the balance is in course of erection.

Philippine Islands.—An allotment of $40,000 was made from the appropriation for construction and repair of hospitals for use in the Philippines Division during the fiscal year, and an allotment of $5,000 was also made from the appropriation for quarters for hospital stewards to cover the cost of quarters for Hospital Corps sergeants, first class, in the same division.

In addition to the foregoing, the Army general hospitals and the hospitals at military posts already established and occupied were improved or kept in proper repair so far as funds would permit. The

Army and Navy General Hospital, Hot Springs, Ark., was also provided for, but this hospital needs additional buildings and grounds to meet the increased demands being made for accommodations. The following improvements are considered necessary for this general hospital: One officers' ward building, one officers' bathhouse, one officers' mess hall, one double set of officers' quarters, one 2-story ward for veterans, one additional story on each of wards Nos. 4 and 5, one medical and physical gymnasium, one Hospital Corps barrack building, one double set of Hospital Corps sergeants' quarters, one nurses' building; also roads, walks, and grading, together with the necessary plans, surveys, etc.

These improvements are estimated to cost $350,000.

Numerous military posts require new hospital buildings to replace old and dilapidated structures which have been in use for many years, and which require large sums of money annually for repairs or improvements. New structures of a modern type would be economical, but it is not possible to erect a suitable modern hospital at any military post for the maximum sum allowed by law to be spent from the general appropriation for such purpose. Section 1136, Revised Statutes of the United States, limits the cost of permanent structures to $20,000, unless special authority be first obtained from Congress. This law was enacted in 1853, when material and labor were much lower in price than they are at present, and it is thought that this statute should be modified to suit the changed conditions.

New and improved hospitals should be erected at the following military posts in the near future:

Fort McPherson, Ga.—The hospital at this post is entirely inadequate; is located in close proximity to a railroad; has no cellar except a small excavation for a heating apparatus, which was made some years after the building was erected. The heating and ventilation are not suitable for a modern hospital. The plumbing is crude, and efforts have been made from time to time to improve it, but it is far from being in compliance with modern sanitary requirements. The operating room is located in a small annex, and adjoins a small laboratory. There is no instrument room; no etherizing room, no preparation or recovery rooms, and no surgical ward. There is no suitable ward for the isolation of contagious diseases and no prison ward, and the Hospital Corps detachment is quartered in an old temporary wooden building, which was erected for use during the Spanish-American War. The mess room and kitchen are too small, and are unsuited for their purposes, it being necessary to set tables two or three times to accommodate the patients. The entire hospital is such that it would be in the interest of economy and beneficial to the sick to replace it with a modern structure. A hospital of sufficient capacity should contain 87 beds for patients and attendants, and the estimated cost of such a building is $90,000.

Post of Washington Barracks, D. C.—This is an engineer post in connection with the Army War College. A small hospital was erected at this station in 1893; became a general hospital in 1898; was abandoned as such upon the completion of the Walter Reed Army General Hospital in 1909, and is to be torn down for the purpose of securing room to complete a barracks building, which is now partly erected. Some provision should be made for sick call, administrative purposes, and for the temporary care of the sick at this post. It is believed that

a central infirmary, with one small ward, a receiving room, office, etc., to care for the sick until such time as the patients can be moved to the Walter Reed Army General Hospital, will answer the purpose. A suitable infirmary building, in keeping with the other buildings at the post, is estimated to cost $25,000.

Fort Hamilton, N. Y.—In 1904 the commanding officer of this post stated that the present post hospital was entirely inadequate for the needs of the garrison; that there was insufficient space for attendants; that there was no isolation ward and no prison ward, and that in the rearrangement of the post a better site had been selected. In 1906 the chief surgeon, Department of the East, stated that the hospital at Fort Hamilton was very badly located—standing on rather low ground and facing at a distance of 14 yards a noisy public highway, on the other side of which were saloons and other objectionable places of public resort. In view of these circumstances it is believed that the interests of the service will be best subserved by erecting a modern hospital on a more appropriate site, especially so as it is proposed to use the present building for a band barrack. A hospital of sufficient capacity for this post should contain 60 beds for patients and suitable accommodations for attendants, noncommissioned officers, etc. The estimated cost of such a building is $60,000.

Fort Dade, Fla.—This is intended to become the main post in an artillery district, and the present hospital is entirely inadequate and unsuitable. It is a temporary structure, with crude plumbing, lacks modern appliances, and the conditions can only be remedied by the erection of a new and modern hospital. In 1910 the Secretary of War approved a recommendation of the Chief of Coast Artillery that a new hospital be erected at this post, and a suitable structure is estimated to cost $30,000.

Fort Benjamin Harrison, Ind.—One ward wing and the administration building of a modern hospital have been erected at this post, but the building has not been completed. It lacks one ward wing and a rear annex. It is insufficient in capacity, and in March, 1909, the surgeon recommended that the hospital accommodations at this post be doubled. The chief surgeon, Department of the Lakes, stated it is important that the hospital at Fort Benjamin Harrison be completed at an early date, as the hospital facilities are inadequate even for the regular garrison, and are entirely so under present circumstances or when the post is used as a base for the maneuver camp. One wing and the annex of the standard plan are yet lacking; in a word, less than half of the hospital has been completed. The department commander stated that this hospital should be completed by adding the other wing and rear annex required for the standard plan for a 60-bed hospital. To complete this building by adding the other ward wing and rear annex is estimated to cost $40,000.

Fort Crook, Nebr.—The hospital at this post is inadequate. It lacks a suitable kitchen, mess room, Hospital Corps dormitory, prison ward, isolation ward, etc., and it is purposed to add a rear annex to contain these rooms, thus relieving the administration building, providing more room for patients, clerical work, etc. The estimated cost of a rear annex is $25,000.

Fort Des Moines, Iowa.—The hospital at this post has never been completed, and it is inadequate. The administration building and

one ward wing of the standard plan were erected. It lacks one ward wing and the rear annex. To complete this hospital by adding another ward wing and a rear annex is estimated to cost $40,000.

Fort Niagara, N. Y.—The hospital at his post has 13 beds and the garrison is to consist of eight companies of Infantry. This will require hospital accommodations for 32 patients, 15 Hospital Corps privates, and 4 noncommissioned officers. It is proposed to enlarge this hospital by adding another ward for 12 beds and a rear annex to contain kitchen, mess hall, Hospital Corps dormitory, prison ward, isolation ward, etc., and the estimated cost of these improvements is $35,000.

Whipple Barracks, Ariz.—The hospital at this post is inadequate. It lacks sufficient room for patients, attendants, prisoners, etc., and an addition to contain the rooms desired is estimated to cost $25,000, as construction work at this post is very expensive.

Hawaiian Islands.—There is a small frame hospital at Fort Shafter, and the intention is to enlarge the garrison of the island. In the opinion of this office accommodations should be provided for 150 patients, 52 Hospital Corps privates, and 13 noncommissioned officers. Owing to the high cost of material and skilled labor, $200,000 is estimated for the erection of suitable hospital buildings for the forces.

Army General Hospital, Fort Bayard, N. Mex.—Authority was given to erect three additional ward buildings for this general hospital, but it was only possible to enter into contract for the erection of two of these wards, and $50,000 is needed to erect the third ward building.

Seacoast Artillery Posts.—Owing to the increase in Coast Artillery and the concentration of companies at various posts, it is necessary to increase the hospital accommodations by enlarging the buildings. Such has been done at several posts, but it is estimated that $50,000 will be required to complete the work.

Isolation Hospitals.—Thirteen of these hospitals have been authorized, of which 10 have either been completed or are in course of erection, and 3 are to be contracted for. These buildings are absolutely necessary at large military posts, but it has not been possible to secure funds for more than three during any one year. It is essential to good sanitary administration in the Army that this policy be continued and that provision be made promptly for the erection of isolation hospitals at the larger military posts which contain a regiment or more. At least 15 more of these hospitals will be required, and at the rate of 3 in each year it will require 5 years to supply the most important posts, such as Fort Douglas, Fort Snelling, Vancouver Barracks, and similar stations. These hospitals are for patients suffering from infectious diseases and for those under observation when diagnosis is doubtful. They contain, in addition to the wards, dressing rooms, serving rooms, toilet rooms, nurses' rooms, diet kitchens, a mortuary, and a complete disinfecting plant when necessary.

Hospital Corps Sergeants' Quarters.—Owing to the limited appropriation for these buildings it was not possible to erect additional quarters. A number of large military posts are in need of quarters for these noncommissioned officers, and the appropriation should be liberal until such time as the Hospital Corps sergeants are supplied with suitable habitations. The Philippines Division is in need of funds for this purpose, $12,000 being requested by the division com-

mander, but it was only possible to supply $5,000. All the quarters at military posts already established and occupied have been repaired, improved, and kept in good condition so far as the limited appropriation would permit.

The Army Medical School occupies a rented building in the city of Washington, and it being one of the permanent service schools it would be much more economical as well as more fitting and convenient for it to be housed in buildings erected by the Government. It is proposed to locate these on the tract of land occupied by the Walter Reed General Hospital, so that the students may have the clinical advantages and the instruction in administration afforded by the hospital and the hospital may enjoy the laboratory conveniences of the school. These buildings are estimated to cost $350,000.

Estimates for new construction which is absolutely essential to the proper care of the sick have been for some years lopped off of the estimates in accordance with the instructions of the Secretary in order to reduce the War Department estimates until the necessities of the department in this respect have become very urgent and have accumulated to a large total. The following are the items which are considered to be immediately necessary and are accordingly included in the estimate laid before the Secretary for the fiscal year 1912–1913:

Hospital:	
Fort McPherson, Ga.	$90,000
Fort Hamilton, N. Y.	60,000
Fort Logan H. Roots, Ark.	50,000
Fort Dade, Fla.	30,000
Dispensary, Washington Barracks, D. C.	25,000
Three isolation hospitals	60,000
To enlarge and improve hospitals at artillery posts	100,000
Enlargement of hospital:	
Fort Benjamin Harrison, Ind.	40,000
Fort Des Moines, Iowa	40,000
Fort Crook, Nebr.	25,000
Fort Niagara, N. Y.	35,000
Whipple Barracks, Ariz.	25,000
Additional buildings, Fort Shafter, Hawaii	120,000
Construction and repair, Philippine Islands	120,000
Army Medical School, Washington, D. C.	350,000
Army and Navy General Hospital, Hot Springs, Ark.	350,000
Additional ward, General Hospital, Fort Bayard, N. Mex.	50,000
Repairs, hospitals, all posts in the United States	200,000
Quarters for sergeants	80,000
Repairs to general hospitals	125,000
Total	1,975,000

MEDICAL AND HOSPITAL SUPPLIES.

Congress appropriated $700,000 for the support of the Medical Department of the Army for the fiscal year 1911. This was the amount called for in the estimate which was approved by the Secretary of War. There remained a considerable part of the $367,000 appropriated by Congress in the general deficiency bill for "Replacing Medical Supplies Destroyed by Fire" in the New York Medical Supply Depot in February, 1910, and this money, supplementing the current appropriation, enabled the department to restock and maintain in good working condition the several supply depots located in New York, Washington, St. Louis, and San Francisco.

The policy of assembling the field supplies has been continued as heretofore, and the expenditure for the year past amounted to $303,663.97. The principal field supply depots are maintained in the city of Washington and the Old Powder Depot, St. Louis, Mo. The first named of these depots is used for the assemblage of various units which go to make up a complete field equipment for different organizations. After they have been assembled in Washington it is customary to ship them as units to different points where they may be needed, either in actual campaign conditions or for storage. It became evident during the year that it was most desirable to place some of these supplies in San Francisco for use on the Pacific coast. The supplies necessary for a division of troops were placed there and a similar equipment sent to Honolulu to provide for possible stress of conditions in Hawaii. The field equipment in Manila has been maintained at its ordinary total. The medical supplies issued to the Philippines during the fiscal year amounted to $103,661.83.

A new storehouse and office facilities for the depot have been obtained in the city of Washington, and the depot has been moved from its old location on Pennsylvania Avenue to a modern fireproof building on M Street, near the Union Station. This building is absolutely fireproof, and all of the supplies required for the depot are on one floor, obviating the use of elevators and greatly facilitating the handling of all kinds of materials. The wisdom of maintaining a large field supply at central points was exemplified upon the concentration of troops at San Antonio in March, 1911, for the Maneuver Division. The rapidity with which medical supplies adequate for 20,000 men were gotten together at San Antonio from the field depot at St. Louis was most gratifying, and it is a fact that the supplies for this number of men were on the cars in San Antonio eight days after the telegram was sent from this office directing the shipment from the St. Louis Medical Supply Depot. It is believed that this abundant provision of everything needful in medical field service for so large a mobilization of men marks an unusual advancement for the Army, in the accomplishment of proper provision for the care of the sick. The entire development and accomplishment of this plan was brought about with the utmost celerity and with scarcely any embarrassment. The entire matter was accomplished by telegrams of brief character, and cooperation of all the departments concerned in getting the supplies to the designated points worked out to a most gratifying result.

The mobilization of the troops at San Antonio presented an opportunity for extensive tests of present field equipment. A special board of medical officers, with a representative of the Quartermaster's Department, was detailed to make inquiry in this matter and to recommend such changes or modifications as might appear appropriate This report has not been received up to the present time, but it is believed that it will be of very great value to the department, in arriving at a conclusion as to what, if any, changes are necessary in the equipment as at present supplied. It may be stated that few, if any, complaints have been received from any point along the Mexican border of the quality or sufficiency of the medical supplies and equipment furnished for field use.

The body of the ambulance which was designed and approved by the War Department in 1909 has been satisfactorily fitted to an auto-

mobile chassis of approved standard type, and it is believed that an excellent motor ambulance has been secured by this adaptation. The vehicle is light and at the same time durable, and the demonstration that it is possible to put the ambulance body on a commercial truck of standard make marks a distinct advance toward the provision of motor ambulances in quantity in time of war and greatly strengthens what has heretofore been a weak point in the preparedness of the Medical Department for war.

Earnest effort has been directed to the provision of portable X-ray machines. It is desired to use these machines at evacuation hospitals and the project is well under way toward a successful result.

A modified packsaddle for field transportation of medical supplies has been adopted after prolonged study, and opportunities for its manufacture and purchase are now excellent.

Army medical supplies costing $42,492.42 were transferred during the year to States and Territories for the use of the Organized Militia, the same continuing to be the property of the United States conformably to section 1661, Revised Statutes, and laws supplementary thereto. In addition cash sales of medical equipment were made to States for like use to the amount of $2,643.71, title to the equipment so sold vesting in the States. Transfers of Medical Department property costing $7,577.14 were made during the year to the Isthmian Canal Commission, and of supplies costing $1,666.17 to various other branches of the public service. In addition, cash sales not included in the above were made as authorized by existing laws and regulations to the amount of $13,222.51, and supplies estimated as worth $671.50 were expended toward the relief of sufferers from famine in China pursuant to the act of February 18, 1911. The moneys or credits arising on account of these transactions will be available until June 30 next, under the provisions of the act of June 12, 1906 (34 Stats., 256), to replace the articles transferred, sold, or expended as above. By virtue of this law the Medical Department is thus enabled to extend its facilities of purchase, inspection, and issue to those branches of the executive service which desire to utilize them, without materially impairing the medical equipment of the Army. Details of these issues and sales are shown in the following table:

A. Supplies issued to States and Territories for the use of the Organized Militia, under section 1661, Revised Statutes, and appropriations supplementary thereto:

Alabama	$1,186.09
Arizona	79.25
Arkansas	2,157.22
California	49.56
Colorado	21.61
Connecticut	101.10
District of Columbia	363.74
Idaho	150.87
Indiana	6,709.38
Iowa	3,044.07
Kentucky	1,011.89
Louisiana	812.99
Maine	838.07
Maryland	122.52
Massachusetts	981.76
Michigan	968.37
Minnesota	36.00
Mississippi	2,840.86
Missouri	526.59

A. Supplies issued to States and Territories for the use of the Organized Militia, etc.—Continued.		
Montana	$12.30	
New Hampshire	536.76	
New Jersey	84.46	
New Mexico	1,467.27	
New York	3,497.33	
North Dakota	238.99	
Ohio	2,786.72	
Oklahoma	3,282.68	
Pennsylvania	3,772.11	
South Dakota	11.18	
Texas	94.38	
Vermont	82.06	
Virginia	3,594.22	
Washington	313.98	
West Virginia	20.86	
Wisconsin	695.18	
		$42,492.42
B. Sales to States under section 17, act of Jan. 21, 1903 (32 Stats., 778):		
Florida	90.00	
Georgia	0.20	
Indiana	19.87	
Iowa	463.19	
Maine	93.13	
Nebraska	40.63	
New York	26.19	
Ohio	61.60	
Pennsylvania	1,788.56	
Winconsin	60.34	
		2,643.71
C. Supplies transferred to other bureaus and departments of the Government:		
Isthmian Canal Commission	7,577.14	
Engineer Department, United States Army	7.75	
Ordnance Department, United States Army	4.70	
Quartermaster's Department, United States Army	389.23	
Navy and Marine Corps	355.11	
Forest Service	909.38	
		9,243.31
D. Sales to the civil government of the Philippine Islands		716.98
E. Sales to the United States Soldiers' Home		5,876.81
F. Sales to civilian employees of the Army and civilians		6,628.72
G. Issues toward the relief of sufferers from famine in China		671.50
Total		68,273.45

LIBRARY OF THE SURGEON GENERAL'S OFFICE.

The building occupied by the library and museum is now undergoing renovation, an appropriation of $10,000 having been obtained for this purpose. The entire interior of the building has been repainted with but slight interruption to the work carried on by the museum and library division.

During the year there were presented to the library 551 books and 4,503 pamphlets and journals. A very valuable gift was the bequest of the late Thomas Windsor, of Manchester, England, including a number of books and pamphlets of which the library did not possess copies. The most important portion of this bequest was a small collection of medical manuscripts of the fifteenth and sixteenth centuries, including two beautiful MSS. of Constantinus Africanus, a MS. of the treatise of Robert Grosseteste, bishop of Lincoln, De Venenis, and a manuscript in English of John de Burdews on the plague.

The following table shows the additions made to the library during the year 1910–11:

	On hand June 30, 1910.	Added during fiscal year.	Total, June 30, 1911.
	Volumes.	*Volumes.*	*Volumes.*
Medical journals	53,623	1,121	54,744
Medical transactions	8,610	108	8,718
Bound theses	2,604	.....	2,604
Bound pamphlets	3,092	.....	3,092
Other medical books	104,341	2,008	106,349
Total	172,270	3,237	175,507
Medical theses	83,767	3,328	87,095
Medical pamphlets	220,941	2,774	223,715
Total	304,708	6,102	310,810

ARMY MEDICAL MUSEUM.

The total number of specimens in the museum at the close of the fiscal year June 30, 1911, is 34,447.

The following statement shows in detail the additions and changes in the different sections:

Pathological section:

In museum June 30, 1910		12,952
Discarded	25	
Donated	1	
		26
		12,926
Received during the year		63
In museum June 30, 1911		12,989

Anatomical section:

In museum June 30, 1911	1,186

Section of comparative anatomy:

In museum June 30, 1910	694
Discarded	1
In museum June 30, 1911	693

Microscopical section:

In museum June 30, 1911	12,916

Miscellaneous section:

In museum June 30, 1910	3,166
Discarded	10
	3,156
Received during the year	224
In museum June 30, 1911	3,380

Provisional section, pathological:		
In museum June 30, 1910		522
Discarded	87	
Donated	67	
	—	154
In museum June 30, 1911		368
Provisional section, anatomical:		
In museum June 30, 1910		378
Discarded	5	
Donated	2	
	—	7
In museum June 30, 1911		371
Photographic section:		
In museum June 30, 1911		2,544

RECAPITULATION.

Specimens in museum June 30, 1910	34,358
Discarded and donated	198
	34,160
Added during the year	287
On hand June 30, 1911	34,447

The following are some of the interesting pathological specimens received during the fiscal year ending June 30, 1911:

Malformations.—Specimen 14160, diprosopus triophthalmus in a chicken; contributed by Mr. E. S. Schmid, Washington, D. C. Specimen 14169, syncephalus in a chicken; contributed by Mr. James Mulvey, Washington, D. C. Specimen 14222, atrophy of twin fetus, placental thrombosis; donated by Dr. D. P. Hickling, Washington, D. C.

Shot wounds.—Specimen 14220, shot wound of leg, gangrene, amputation; contributed by Dr. E. F. Magruder, Washington, D. C. Specimens 14180 to 14183, experimental shot fracture of bone, by pointed bullet, 30, Springfield rifle, ammunition 1906; 14180, the skull; 14181 and 14182, femurs; 14183, ankle joint; contributed by Col. L. A. La Garde, Medical Corps, United States Army.

Uncinariasis.—Specimen 14192, ova of hookworm; contributor unknown.

Digestive system.—Specimen 14190, remarkable caries of teeth in young person; contributed by C. M. Howland, D. D. S., Washington, D. C. Specimen 14161, acute dilatation of stomach, in soldier, after measles; death in about 36 hours; contributed by Capt. L. T. Le Wald, Medical Corps, United States Army. Specimen 14178, ulcer of stomach, death from hemorrhage; contributed by Dr. W. R. Greene, Washington, D. C. Perforating ulcers of duodenum, specimen 14172, in soldier, age 31; death from hemorrhage; contributed by First Lieut. M. C. Coburn, Medical Corps, United States Army. Specimen 14173, in man, age 54; death from perotonitis; contributed by Dr. R. W. Baker, Washington, D. C. Specimen 14165, sarcoma of jujenum, spleen and peritoneum also involved; contributed by Dr. B. M. Randolph, Washington, D. C. Specimen 14167, constriction of ileum, with gangrene; contributed by Dr. J. T. Kelley, jr., Washington, D. C. Specimen 14174, hernia, ileum strangulated by adherent loop of appendix; Filipino; no complaint until a few hours before death; contributed by First Lieut. J. R. Barber, Medical Corps, United States Army. Specimen 14159, umbilical hernia with fistula, in woman five months pregnant; removed by operation; contributed by First Lieut. T. M. Foley, Medical Corps, United States Army. Specimen 14176, calculus removed after death from colon of horse; death from obstruction; contributed by Dr. A. W. Acheson, V. S., Washington, D. C. Specimen 14217, melanotic sarcoma of liver; secondary to similar tumor of eye; contributed by Dr. H. H. Hawxhurst, Washington, D. C.

Nervous system.—Specimen 14194, tuberculous tumors of brain in child 2 years old; no tuberculosis elsewhere; contributed by Dr. S. S. Adams, Washington, D. C.

Circulatory system.—Specimen 14170, shot laceration of heart; suicide; soldier; contributed by Capt. C. L. Cole, Medical Corps, United States Army. Specimen 14219, large varicose veins of leg in young woman; removed by operation by Dr. J. F.

Mitchell, Washington, D. C. Specimen 14164, sarcoma of spleen; same case as that of intestine 14165 and peritoneum; contributed by Dr. Randolph, Washington, D. C.

Urinary organs.—Specimen 14175, papillo-adenoma of kidney, contributed by Dr. Van Swearingen, Washington, D. C.

Female generative system.—Specimen 14171, fibroid tumor of parovarium; woman, age, 55; removed by operation; contributed by Dr. I. S. Stone, Washington, D. C.

Skin.—Specimen 14177, dermoid cyst, from horse; contributed by Dr. W. W. Acheson, V. S., Washington, D. C.

Eye.—Specimen 14188, cataract after injury. Specimen 14184, inflammation. Specimen 14185, iridocyclitis. Specimen 14186, iridocyclitis and glaucoma. Specimen 14187, destruction of eye after injury; enucleation in all of the cases; contributed by Dr. R. S. Lamb, Washington, D. C.

Bones and joints.—Fractures: Specimen 14196, femur; repair; knee joint involved. Specimen 14198, femur, green stick fracture; repair, osteoporosis. Specimen 14200, femur, repair; 14202, femur, repair; 14206, tibia, impacted fracture, repair; 14209, tibia, repair. All of these specimens showed deformity after healing. Inflammation with exostoses: Specimen 14205, tibia; 14197, femur; 14207, tibia. Osteitis deformans, 14208, tibia. Ostemyelitis: Specimens 14163, 14195, and 14204, femurs. Osteoporosis: Specimen 14215. Arthritis: Specimen 14201, head of femur. Osteoarthritis: Specimen 14199, head of femur; 14203, knee joint with dislocation; 14210, upper end of ulna; 14200, 14212, 14213, 14214, lumbar and thoracic vertebræ; 14216, bones of leg, knee surface. All of the above specimens of bones, with one exception, were received from the U. S. National Museum; collected from cemeteries of Peru, by Dr. Ales Hrdlicka, and believed to be several hundred years old. The exception is 14163, removed by Lieut. Col. W. H. Arthur, Medical Corps, United States Army, from man age 49, who had had acute rheumatism of knee.

In the miscellaneous series.—Specimen 3314 is a mosquito house from Dr. William Utzinger, of Zurich, Switzerland. Specimen 3363, Japanese rifle, donated by the Japanese war office. Specimen 3367, Harris incinerator. Specimens 3509 and 3510, models of the sewage disposal plant of Baltimore, Md. Specimens 3317, 3393, and 3394, first aid packets. Specimens 3391 and 3392, Hospital Corps pouches. Specimens 3368, 3373, and 3400, medical, surgical, and food chests used in the United States Army. Specimens 3387-3390, medical, surgical, and pharmacy chests used in French army. Specimens 3375–3384, 3386, and 3399 (from Maj. Charles Lynch, Medical Corps, United States Army), litters, old and recent, mainly those used in the United States Army. Specimens 3318–3362, 3365, and 3402 to 3407 and 3512, microscopical accessories used by the late Surg. J. J. Woodward, United States Army, at the Army Medical Museum prior to 1882.

Specimens 3417 to 3441, 3454 to 3506, 3508, 3511, and 3531, hypodermic syringes, old and recent. Specimens 3519 to 3520, sphygmomanometers. Specimen 3313 (from Dr. Robert Fletcher), 3410–3416, 3442–3453, and 3515, old and recent stethoscopes. Specimens 3395–3397, 3507, 3518, 3521, and 3535, gastro-intestinal instruments of recent date. Specimens 3516–3517, recent ophthalmoscopes. Specimens 3522–3528 and 3534, recent otological instruments.

ARTIFICIAL LIMBS AND APPARATUS.

Under the laws relating to artificial limbs and apparatus, or commutation therefor, orders on manufacturers were given during the fiscal year for 21 artificial legs and 2 arms. Commutation certificates were issued for 157 cases of amputated leg, 70 of amputated arm, 8 of amputated foot, and 1,460 cases of loss of use of limb.

Under the act of June 17, 1870, and subsequent amendments thereto, 23,436 disabled soldiers and sailors have been furnished artificial limbs or apparatus, or have received commutation in money since the passage of the act as follows: Total number benefited to June 30, 1911, 23,436; died, 12,869; dropped from rolls, 592; rejected after one or more payments, 569; remaining on rolls at end of fiscal year, 9,406, being a loss of 647 beneficiaries during the year.

It is estimated that the sum of $115,000 will be required to pay the claims coming due during the fiscal year ending June 30, 1913.

APPLIANCES AND TRUSSES.

One hundred and forty-eight appliances were issued during the fiscal year and 465 trusses were furnished and fitted.

MISCELLANEOUS.

PUBLICATIONS BY MEDICAL OFFICERS.

Among the notable works of medical officers during the year appeared a valuable book illustrative of the tactical problems which are encountered by medical officers in active service in the field. This work was by Maj. Edward L. Munson, Medical Corps, United States Army, in collaboration with Maj. John F. Morrison, General Staff, and is entitled "A Study in Troop Leading and Management of the Sanitary Service in War."

The Secretary of War when visiting Porto Rico in January, 1910, was impressed with the importance of the campaign which had been carried on there against hookworm since its initiation in 1900 by the labors of Maj. Bailey K. Ashford, Medical Corps, United States Army. Believing that the information and experience acquired in this campaign would be of very valuable application in the infected portions of the United States, he directed Maj. Ashford to prepare for publication by the Government a full history of the operations against hookworm in Porto Rico. A very full and valuable report of 335 pages has been written by this officer and his collaborator, Dr. Pedro Gutierrez Igaravidez, and it being decided that this could not properly be published from the appropriation for printing of the War Department, it was printed as Senate Document No. 808, Sixty-first Congress, third session, in accordance with the resolution proposed by Senator Owen.

As the publications of medical officers are a valuable index of their professional and scientific activities, the following list of such publications, arranged alphabetically by the names of the authors, is given to bring the list of these publications up to the date of the beginning of the present fiscal year. It is proposed hereafter to publish a list of such treatises and articles as are approved for publication by this office, under the provisions of paragraph 439 of the medical manual, for each fiscal year.

Publications by medical officers of the Army, Jan. 1, 1910, to July 1, 1911.

Author.	Article.	Published in—
Ashburn, Maj. Percy M.	Report on medical conditions in Liberia.	The Military Surgeon, October, 1910.
	Account of an instructive typhoid epidemic.	The Military Surgeon, March, 1910.
	Report on laboratory work at the Army General Hospital, San Francisco, Cal., for the year 1909.	The Military Surgeon, April, 1910.
Barber, First Lieut. John R.	Liquor cresolis compositus, extempore.	The Military Surgeon, March, 1910.
Bissell, Maj. Wm. G.	Personal hygiene and camp sanitation and the respective duties of the line and medical officers in regard thereto and the necessity of early discovery and removal of persons infected with communicable diseases.	The Military Surgeon, April, 1910.
Blanchard, Capt. R. M.	A dispensary ambulance.	The Military Surgeon, May, 1910.

Publications by medical officers of the Army, Jan. 1, 1910, to July 1, 1911—Continued.

Author.	Article.	Published in—
Brewer, First Lieut. Isaac W., M. R. S.	The disposition of excrement of troops while on the march or in bivouacs of short duration.	The Military Surgeon, June, 1911.
Brown, First Lieut. Ira C., M. R. S.	Camp Wikoff, Montauk Point, N. Y., in 1898.	The Military Surgeon, March, 1910.
"Caduceus"	The sick report and the efficiency of the Army.	The Military Surgeon, August, 1911.
Chamberlain, Maj. Weston P.	The disappearance of beriberi from the Philippine (native) Scouts.	The Military Surgeon, May, 1910.
Coe, First Lieut. Henry C., M. R. S.	The "inactive" Medical Reserve Corps	The Military Surgeon, April, 1910.
Cole, Capt. Clarence L.	Ankylostomiasis	The Military Surgeon, January, 1911.
Crabtree, Capt. Geo. H.	Notes of a case of reconstructive endoaneurysmorrhaphy.	Journal of the American Medical Association, 1911.
Craig, Capt. Charles M.	On the sexual forms of the malarial plasmodia occurring in the blood of man.	The Archives of Internal Medicine, 1910.
	Further observations upon paramœba hominis, an intestinal parasite of man.	Journal of the American Medical Association, 1910.
	Observations upon Noguchi modifications of the Wassermann complement test in the diagnosis of lues in the military service.	Journal of Experimental Medicine, 1910.
	Entamœba tetragena as a cause of dysentery in the Philippine Islands.	Journal of the American Medical Association, 1910.
	The nature of the virus of yellow fever, dengue, and pappataci fever.	New York Medical Journal.
	The relation of certain bacteria to nonspecific reactions with the complement fixation test for lues.	Journal of Experimental Medicine, 1911.
	The immediate effect upon the complement fixation test for lues of treatment with arsenobenzol; analysis of 225 cases.	The Archives of Internal Medicine, 1911.
	The importance to the Army of diseases transmitted by mosquitoes, and methods for their prevention.	The Military Surgeon, March, 1910.
Culler, Capt. Robert M.	Liver abscess	Journal of the American Medical Association, 1910.
De Loffre, Capt. Samuel M.	Diseases of the heart among applicants for enlistment.	The Military Surgeon, September, 1910.
Dolley, First Lieut. Gilman C.	Gangrene of the lung in which trichomonas intestinalis was the only apparent etiological factor.	
Duncan, Capt. Louis C.	A case of balantidium dysentery	The Military Surgeon, September, 1910.
	Mathematics and medicine	The Military Surgeon, October, 1910.
Eastman, Capt. Wm. R.	A report on intestinal parasites in scout companies.	The Military Surgeon, June, 1910.
	An incidence of Moro surgery	The Military Surgeon, June, 1911.
Ebert, Lieut. Col. R. G.	How may the value of the Medical Department to the military establishment be enhanced?	The Military Surgeon, March, 1910.
Ekwurzel, Maj. Geo. M.	The Army Hospital Corps: How its efficiency can be increased.	The Military Surgeon, August, 1911.
Fauntleroy, Maj. P. C.	Some notes taken at the surgical clinics in Chicago during the convention in November, 1910.	The Military Surgeon, April, 1911.
Field, Maj. P. C.	The recruit depot point of view	The Military Surgeon, June, 1911.
	Phorometry of normal eyes in young male adults.	New York City Ophthalmological Journal, 1911.
Fletcher, First Lieut. John P.	A safe and rapid method of antityphoid vaccine administration.	Journal of the American Medical Association, 1911.
	A rational indication for bacteriological vaccine in typhoid fever, with a report of 14 cases.	
Ford, Maj. J. H.	The conditions influencing service of militia medical officers.	The Military Surgeon, May, 1910.
	Regulations for the government of post hospitals.	The Military Surgeon, July, 1911.
Foster, First Lieut. Geo. B., jr.	Antityphoid vaccination: An incidence illustrating its efficacy.	Journal of the American Medical Association, 1910.
	The presence of acid alcohol-resisting bacilli in the blood.	The Military Surgeon, February, 1910.
Gossman, Maj. Geo. H. R.	The present status of antityphoid inoculation.	Journal of the American Medical Association, 1910.
Halliday, First Lieut. C. H.	Low-country fever diagnosis as dengue	The Military Surgeon, August, 1911.
Harris, Lieut. Col. H. S. T.	Practicable field sanitation	The Military Surgeon, March, 1910.
Harris, Capt. J. R.	Openings for young physicians in the Army.	American Journal of Clinical Medicine, 1910.

Publications by medical officers of the Army, Jan. 1, 1910, to July 1, 1911—Continued.

Author.	Article.	Published in—
Hartsock, Maj. Frederick M..	Antityphoid vaccinations: Result of 1,100 inoculations.	Journal of the American Medical Association, 1910.
	The dangers of introducing infections from our tropical possessions by returning troops.	The Military Surgeon, March, 1910.
Hill, First Lieut. Eben C.....	Flatfoot a possible cause of backache.....	The Military Surgeon, January, 1911.
	A simple method of rectal feeding or giving normal saline solution per rectum.	
	The high death rate from diphtheria in the United States: Probable cause and means of reduction.	
	A simple, removable head bandage.	
	Carriers in relation to the spread of diphtheria.	
Jackson, First Lieut. Thomas W., M. R. S.	Blastomycetic dermatitis.....	The Military Surgeon, August, 1910.
	Plague.....	Published in Vol. I, Hare's System of Modern Treatment, 1910.
	The adequate treatment of gonorrhea.	
	A case of intestinal bilharziosis.....	The Military Surgeon, September, 1910.
Jones, First Lieut. Glenn I...	Chronic influenza.....	American Journal of Medical Sciences, 1910.
	An oral lesion in apparently cured syphilis..	The Military Surgeon, August, 1911.
Jones, Capt. Harold W.....	A series of cases treated with Ehrlich's arsenobenzol.	Boston Medical Journal, 1911.
	The value of camps of instruction for medical officers of the National Guard: Some impressions.	The Military Surgeon, April, 1910.
	The masquerader, syphilis: Some statistics from hospital practice.	The Military Surgeon, June, 1911.
Jones, Capt. Percy L.....	The ant as a destroyer of flies.....	The Military Surgeon, July, 1910.
Keefer, Lieut. Col. F. R.....	The prevention of typhoid fever.....	The Military Surgeon, March, 1911.
Kilbourne, Capt. E. D. (Board for Study of Tropical Diseases).	The bacteriology of an epidemic of bacillary dysentery.	The Military Surgeon, April, 1910.
Knox, First Lieut. Henry A..	Filariasis at Fort Hancock, N. J.....	The Military Surgeon, June, 1911.
Kremers, First Lieut. E. D..	Notes on the Thirty-third Regiment of Chinese Infantry; reviewed by Capt. W. F. Creary, Eighth Infantry, at Nanking, China.	The Military Surgeon, August, 1911.
LeWald, Capt. Leon T.....	Adenoid and tonsillar hypertrophies in recruits.	The Military Surgeon, May, 1910.
Love, Capt. Albert G.....	Infection of southern recruits with intestinal nematodes.	The Military Surgeon, October, 1910.
Lyon, First Lieut. Culbert W.	Venemous snakes of the United States, their bites and treatment.	Do.
Lyster, Maj. William J. L....	A statement of a recent incidence of protection from typhoid by inoculation.	The Military Surgeon, May, 1911.
Maus, Col. L. M.....	Venereal diseases, their prevention and treatment.	The Military Surgeon, August, 1910.
	Further observations on the prophylaxis of venereal diseases in the United States Army.	The Military Surgeon, December, 1910.
	The ethics, scope, and prerogative of the Army medical officer.	The Military Surgeon, March, 1911.
Morse, Capt. Charles F.....	The prevalence and prophylaxis of venereal diseases at one military post.	The Military Surgeon, September, 1910.
Munson, Maj. Edward L.....	Sanitary tactics.....	Approved by the Surgeon General and published with the consent of the War Department.
	Should medical officers be held directly responsible for the sanitation and health of the troops with whom they serve, and, if so, what should be their powers and responsibilities (abstract).	The Military Surgeon, June, 1910.
	The practical utility of map problems in medico-military education.	The Military Surgeon, February, 1910.
McKinney, First Lieut. G. L.	A report on venereal diseases at Camp Stotsenburg, February to August, 1910, and an analytical report of 75 bubo operations.	The Military Surgeon, February, 1911.
	Some suggestions for increasing the efficiency of the ambulance company.	The Military Surgeon, July, 1910.

Publications by medical officers of the Army, Jan. 1, 1910, to July 1, 1911 —Continued.

Author.	Article.	Published in—
Nichols, Capt. H. J.	Yaws, with a demonstration of infected tissue	Read before the New York Pathological Society, Feb. 8, 1910, and published in the proceedings of the society.
	Hookworm and pellagra	Read before the Springfield Academy of Medicine; The Military Surgeon, June, 1910.
	Arsenobenzol and sodium cacodylate	Journal of the American Medical Association, 1911.
	Fact and fancy about the hookworm	New York Medical Record, 1911.
	Further observations on certain features of experimental syphilis and yaws in the rabbit	Journal of Experimental Medicine, 1911.
O'Connor, Maj. R. P.	Relation of the eyes to rifle shooting	Journal of the Military Service Institute, 1910.
	Report of a case of dislocation of a malar bone.	The Military Surgeon, 1911.
Owen, Capt. L. J.	Sewage disposal at Fort Benjamin Harrison.	Read before the Indiana Sanitary and Water Supply Association, February, 1910.
	Measurements of the chest with the tape measure and spirometer.	The Military Surgeon, May, 1910.
	Feeding of infants in the Tropics	The Military Surgeon, September, 1910.
Patterson, Maj. Robert U.	A modified Caldwell kitchen incinerator for field use.	The Military Surgeon, November, 1910.
Phalen, Capt. James M.	The bacteriology of an epidemic of bacillary dysentery.	The Military Surgeon, April, 1910.
Pierson, Capt. R. H.	Military hygiene in cold countries	The Military Surgeon, March, 1910.
Pillsbury, First Lieut. Henry C.	Report on a visit to India	The Military Surgeon, June, 1910.
Pipes, Capt. H. F.	X-ray localization by construction	Journal of the American Medical Association.
Powell, Capt. William A.	Report of observations made during a tour of duty at Camp Wilhelm, Tayabas, P. I.	The Military Surgeon, 1911.
Raymond, Lieut. Col. Henry I.	Creeping eruption (Dermamyiasis linearis migrans Oestrosa).	The Military Surgeon, August, 1911.
Reasoner, Capt. M. A.	Wassermann reaction in the service, based on 1,000 reactions.	The Military Surgeon, August, 1910.
	Some miscellaneous notes by Ralph C. Matson, M. D., Portland, Oreg., and Capt. M. A. Reasoner, Medical Corps, "It has been found possible to keep syphilitic blood for 4 months without any variation in the strength of the Wassermann."	The Military Surgeon, 1911.
	A simple technique for salvarsan injection	Journal of the American Medical Association, 1911.
	One case of malaria treated by salvarsan	The Military Surgeon, 1911.
Reno, Maj. William W.	A ready means of increasing the marching radius of the soldier.	The Military Surgeon, September, 1910.
	The sanitary officer	The Military Surgeon, February, 1910.
	A ready means of increasing marching capacity.	The Military Surgeon, June, 1911.
Rhoads, Maj. T. L.	Blanks for the internal administration of Army general hospitals.	The Military Surgeon, March, 1911.
	Cases from the Army surgical clinic	1911.
Richards, Capt. Robert L.	A study of cases of mental disease from the standpoint of the military surgeon.	The Military Surgeon, May, 1910.
	Mental and nervous diseases in the Russo-Japanese War.	The Military Surgeon, February, 1910.
Roberts, Maj. William M.	Report of a trip to Africa	The Military Surgeon, March 1911.
	Medical service with cavalry in the field	The Military Surgeon, March, 1910.
Ruffner, Maj. Earnest L.	The private sanitary Filipino Scouts	The Military Surgeon, August, 1910.
Russell Maj. Frederick F.	Antityphoid vaccination in the American Army.	The proceedings of the American Public Health Association, 1910.
	Control of typhoid fever in the Army by vaccination	Read before the New York Academy of Medicine and published in the New York State Journal of Medicine; reprinted for distribution by Surgeon General's Office.

Publications by medical officers of the Army, Jan. 1, 1910, to July 1, 1911—Continued.

Author.	Article.	Published in—
Russell, Maj. Frederick F...	The prevention and treatment of typhoid fever with antityphoid vaccine.	Read before the District Medical Association in Boston.
	Isolation of typhoid bacilli from urine and feces, with a description of a new double sugar-tube medium.	
Rutherford, Maj. Henry H...	House construction in the Tropics	The Military Surgeon, October, 1910.
Schmitter, Capt. Ferdinand..	Abdominal diphtheria	The Military Surgeon, November, 1910.
Smith, Capt. L. L	Report of a case of diphtheria of the vulva in a child 3 years of age.	1910.
	Mental diseases in the military service, with special reference to dementia præcox.	The Military Surgeon, April, 1911.
Stark, Maj. A. N	Some factors essential to the efficiency of medical officers in active and simulated campaign.	The Military Surgeon, May, 1910.
Siler, Capt. J. F	Report of a case of yaws	The Military Surgeon, September, 1910.
Straub, Maj. Paul F	The training of sanitary troops	The Military Surgeon, April, 1911.
Tenney, Elmer, S., B. L., M. D., Medical Reserve Corps.	Painful heel in arthritis resulting from various causes.	The Military Surgeon, July, 1910.
Thornburgh, Capt. Robert M.	A reinforced plaster splint	The Military Surgeon, March 1910.
	(A translation.) Lessons from the Russo-Japanese War. Precautions for the preservation of public health.	The Military Surgeon, July, 1910.
Tuttle, First Lieut. George B.	History of a case of nephritis occurring at Fort Columbia, Wash.	The Military Surgeon.
	The Gastrodiscus hominis in the Philippines. Report of a case, with introductory helminthological comment.	The Military Surgeon, June, 1910.
Tropical Diseases, Board for the Study of.	Report for first quarter, 1910	The Military Surgeon. August, 1910.
	Report for second quarter, 1910	The Military Surgeon. November, 1910.
	Report for third quarter, 1910	The Military Surgeon, January, February, 1911.
	Report for fourth quarter, 1910	The Military Surgeon, April, 1911.
	Report on epidemic of conjunctivitis among Filipinos.	Philippine Journal of Science.
	Diphtheria in the Philippines	Do.
	Filipino rice No. 2 and beriberi	Do.
	A preliminary account of some experiments undertaken to test the efficacy of the ipecac treatment of dysentery.	Do.
	Disappearance of beriberi from the Filipino (native) Scouts.	The Military Surgeon, May 1911.
	The Wassermann reaction in syphilis, leprosy, and yaws.	Philippine Journal of Science.
	A contribution to the etiology of beriberi	Do.
	Typhoid fever in the Philippine Islands	Do.
	A study of the influence of rice diet and of inanition on the production of multiple neuritis of fowls and the bearing thereof on the etiology of beriberi.	The Military Surgeon, August, 1911.
Vaughan, Dr. Victor C., Medical Reserve Corps.	The Army Medical Service	The Military Surgeon, August, 1910.
Vedder, Capt. E. B	A portable mosquito-proof room (illustrated).	The Military Surgeon, May, 1910.
Weston, First Lieut. H. R., Medical Reserve Corps.	Report of a case of rabies, Camp Overton, P. I.	The Military Surgeon, March, 1911.
Willcox, Maj. Charles	A suggestion for simplifying equipment of mobile units in campaign.	The Military Surgeon, March, 1910.
Wilson, Maj. William H	Report of venereal diseases at Camp Stotsenburg, P. I.	The Military Surgeon, February, 1911.
Winter, Maj. Francis A	Some comments on the disappearance of Potomac malaria at Fort Myer, Va.	The Military Surgeon, March 1910.
Woodbury, Maj. Frank T	Iodine, the ideal surgical antiseptic (illustrated).	New York Medical Journal, 1910.
	Report of shotgun wound of toe	The Military Surgeon, March, 1910.

FINANCIAL STATEMENT, 1911.[1]

Medical and hospital department, 1911.

Appropriated by act approved Mar. 23, 1910		$700,000.00
Refundments during the year		232.50
Total to be accounted for		700,232.50
Disbursed during the year:		
Expenses of medical supply depots	$786.11	
Medical and hospital supplies	427,501.20	
Medical attendance and medicines (except at recruiting stations)	9,966.87	
Medical expenses of recruiting (including medical attendance and medicines at recruiting stations)	7,250.68	
Pay of nurses	850.02	
Pay of other employees	145,263.34	
Hospital laundry	37,930.01	
Expressage	196.26	
Notary fees	54.67	
Gas and electricity for laboratory apparatus	696.28	
Customs duties and internal revenue taxes on medical supplies	655.19	
Miscellaneous	20.00	
		631,170.63
Balances on hand June 30, 1911:		
In United States Treasury	34,524.36	
In transit from disbursing officers to the Treasury	4,008.15	
In hands of disbursing officers—		
New York City	12,009.58	
Washington, D. C.	1,669.98	
St. Louis, Mo.	3,281.02	
San Antonio, Tex.	2,008.04	
San Francisco, Cal.	4,684.58	
Honolulu, Hawaii	628.97	
Manila, P. I.	6,247.19	
		69,061.87
Total accounted for		700,232.50

Medical and hospital department, 1910.

Balances on hand July 1, 1910, act Mar. 3, 1909		$117,508.20
Refundments during the year		7.99
Total to be accounted for		117,516.19
Disbursed during the year:		
Expenses of medical supply depots	$167.56	
Medical and hospital supplies	100,205.32	
Medical attendance and medicines (except at recruiting stations)	2,653.15	
Medical expenses of recruiting (including medical attendance and medicines at recruiting stations)	402.40	
Pay of employees	3,116.18	
Hospital laundry	4,681.31	
Expressage	49.99	
Notary fees	12.12	
Gas and electricity for laboratory apparatus	45.55	
Customs duties on medical supplies	138.30	
		111,471.88
Balance on hand June 30, 1911, in United States Treasury		6,044.31
Total accounted for		117,516.19

[1] The "disbursements" in this statement include settlements with public creditors made by the accounting officers of the Treasury and charged by them to these appropriations.

Medical and hospital department, 1909.

Balance on hand July 1, 1910, act May 11, 1908		$8,382.32
Refundment during the year		1.03
Total to be accounted for		8,383.35
Disbursed during the year:		
Medical and hospital supplies	$4,686.67	
Medical attendance and medicines (except at recruiting stations)	120.00	
Medical expenses of recruiting (including medical attendance and medicines at recruiting stations)	50.00	
		4,856.67
Carried to surplus fund		3,526.68
Total accounted for		8,383.35

Medical and hospital department, certified claims.

Appropriated by act approved Mar. 4, 1911		$12.00
Disbursed during the year:		
Medical attendance, not at recruiting stations		12.00

Replacing medical supplies, 1911-12 (act June 12, 1906, 34 Stats., 256).

Amounts accruing to this fund:		
A. On account of supplies transferred—		
To Ordnance Department, United States Army	$4.70	
To Quartermaster's Department, United States Army	263.99	
To Isthmian Canal Commission	6,846.66	
To Navy and Marine Corps	355.11	
To Forest Service	909.38	
To States, for the use of the militia	40,608.19	
		$48,988.03
B. On account of supplies sold—		
To States, for the use of the militia	2,582.11	
To Civil Government, Philippine Islands	716.98	
To United States Soldiers' Home	5,876.81	
To civilian employees and civilians	6,628.72	
		15,804.62
C. On account of collections from carriers and others for medical property lost or destroyed		714.30
D. On account of supplies expended toward the relief of sufferers from famine in China		671.50
Total to be accounted for		66,178.45
Balance on hand June 30, 1911, in United States Treasury		66,178.45

Replacing medical supplies, 1910–11.

Balances on hand July 1, 1910		$55,409.21
Amounts accruing to this fund:		
A. On account of supplies transferred—		
To Quartermaster's Department, United States Army	$381.68	
To Isthmian Canal Commission	3,707.89	
To States, for the use of the militia	2,230.62	
		6,320.19
B. On account of supplies sold—		
To States, for the use of the militia	84.26	
To civilian employees and civilians	745.22	
		829.48
C. On account of collections from carriers and others for medical property lost or destroyed		612.42
Total to be accounted for		63,171.30

Disbursed during the year, for medical and hospital supplies		$49,711.60
Transfer by Treasury Department to "Replacing medical supplies, 1909–10" to correct erroneous deposit		.71
Countertransfer by Treasury Department to the credit of appropriations for the Isthmian Canal to reimburse the latter the value of supplies returned to the medical department		301.75
Balances on hand June 30, 1911:		
In United States Treasury	$68.84	
In hands of disbursing officer, New York City	13,088.40	
		13,157.24
Total accounted for		63,171.30

Replacing medical supplies, 1909–10.

Balances on hand July 1, 1910		$25,640.03
Amounts accruing to this fund:		
A. On account of collections from carriers for medical property lost or destroyed	$52.02	
B. On account of transfer by Treasury Department from "Replacing medical supplies, 1910–11" to correct erroneous deposit	.71	
		52.73
Total to be accounted for		25,692.76
Disbursed during the year, for medical and hospital supplies		25,174.40
Balances on hand June 30, 1911:		
In United States Treasury	55.93	
In hands of disbursing officer, New York City	462.43	
		518.36
Total accounted for		25,692.76

Replacing medical supplies, 1908–9.

Balance on hand July 1, 1910	$1.69
Carried to surplus fund	1.69

Replacing medical supplies, 1907–8.

Amounts accruing to this fund on account of collections from officers and soldiers for medical property lost or destroyed	$14.96
Carried to surplus fund	14.96

Replacing medical supplies destroyed by fire, 1910–11.

Balance on hand July 1, 1910, act June 25, 1910		$367,000.00
Refundment during the year		8.50
Total to be accounted for		367,008.50
Disbursed during the year for medical and hospital supplies		311,525.23
Balances on hand June 30, 1911:		
In United States Treasury	$12,008.50	
In hands of disbursing officers—		
New York City	27,495.30	
Washington, D. C	15,979.47	
		55,483.27
Total accounted for		367,008.50

Replacing medical supplies destroyed by fire, 1909–10.

Balance on hand July 1, 1910, act Mar. 4, 1909	$12,816.43
Disbursed during the year for medical and hospital supplies	12,815.04
Balance in United States Treasury June 30, 1911	1.39

Library, Surgeon General's Office, 1911.

Appropriated by act approved Mar. 23, 1910		$10,000.00
Disbursed during the year		7,004.82
Balances on hand June 30, 1911—		
In United States Treasury	$1,954.68	
In hands of disbursing officer, Washington, D. C.	1,040.50	
		2,995.18

Library, Surgeon General's Office, 1910.

Balance on hand July 1, 1910, act Mar. 3, 1909	$2,896.96
Disbursed during the year	2,879.86
Balance in United States Treasury June 30, 1911	17.10

Library, Surgeon General's Office, 1909.

Balance on hand July 1, 1910, act May 11, 1908	$160.89
Disbursed during the year	.63
Carried to the surplus fund	160.26

Army Medical Museum, 1911.

Appropriated by act approved Mar. 23, 1910		$5,000.00
Disbursed during the year		3,073.51
Balances on hand June 30, 1911:		
In United States Treasury	$1,749.75	
In hands of disbursing officer, Washington, D. C.	176.74	
		1,926.49

Army Medical Museum, 1910.

Balance on hand July 1, 1910, act Mar. 3, 1909	$1,579.78
Disbursed during the year	1,093.87
Balance in United States Treasury June 30, 1911	485.91

Army Medical Museum, 1909.

Balance on hand July 1, 1910, act May 11, 1908	$92.52
Carried to the surplus fund	92.52

Artificial limbs, 1911.

Appropriated by act approved June 25, 1910		$105,000.00
Disbursed during the year		87,454.40
Balances on hand June 30, 1911:		
In United States Treasury	$14,893.60	
In hands of disbursing officer, Washington D. C.	2,652.00	
		17,545.60

Artificial limbs, 1910.

Balance on hand July 1, 1910, act Mar. 4, 1909	$15,370.35
Disbursed during the year	2,221.05
Balance in United States Treasury June 30, 1911	13,149.30

Artificial limbs, 1909.

Balance on hand July 1, 1910, act May 27, 1908	$46,297.51
Disbursed during the year	169.85
Carried to the surplus fund	46,127.66

Appliances for disabled soldiers, 1911.

Appropriated by act approved June 25, 1910		$2,000.00
Disbursed during the year		986.95
Balances on hand June 30, 1911:		
In United States Treasury	$800.00	
In hands of disbursing officer, Washington, D. C	213.05	
		1,013.05

Appliances for disabled soldiers, 1910.

Balance on hand July 1, 1910, act Mar. 4, 1909	$898.12
Disbursed during the year	109.65
Balance in United States Treasury June 30, 1911	788.47

Appliances for disabled soldiers, 1909.

Balance on hand July 1, 1910, act May 27, 1908	$528.94
Carried to the surplus fund	528.94

Trusses for disabled soldiers, 1911.

Appropriated by act approved June 25, 1910		$6,000.00
Disbursed during the year		3,203.23
Balances on hand June 30, 1911:		
In United States Treasury	$2,200.00	
In hands of disbursing officer, Washington, D. C	596.77	
		2,796.77

Trusses for disabled soldiers, 1910.

Balance on hand July 1, 1910, act Mar. 4, 1909	$2,599.32
Disbursed during the year	394.08
Balance in United States Treasury June 30, 1911	2,205.24

Screening doors, etc., isolating ward, Providence Hospital, Washington, D. C., 1911.

Appropriated by act approved June 25, 1910	$500.00
Disbursed during the year	435.00
Balance in United States Treasury June 30, 1911	65.00

General summary of all appropriations.

Balances on hand July 1, 1910	$657,182.27
Appropriated	828,512.00
Proceeds of sales, etc., accruing to replacing funds, act June 12, 1906 (34 Stats., 256)	74,007.52
Refundments during the year	250.02
Total to be accounted for	1,559,951.81
Disbursed during the year	1,255,764.35
Transferred by Treasury Department to the appropriations for the Isthmian Canal on account of medical supplies returned to the Medical Department	301.75
Carried to the surplus fund	50,452.71
Balances on hand June 30, 1911	253,433.00
Total accounted for	1,559,951.81

VITAL STATISTICS.

The following tables show in detail most of the statistical data upon which the statements in this report are based:

57. Surgical operations performed on American troops.

58. Numerical view of the effect of disease and injury on United States troops serving at home and abroad in the year 1910 compared with the corresponding data for the year 1909, by races.

59. Admissions to sick report, discharges, and deaths in the Army, with ratios per 1,000 of mean strength, in which all available data for the period 1900–1909 are placed in comparison with the year 1910.

60. Admissions to sick report, discharges, deaths, and noneffectiveness, with ratios per 1,000 of mean strength, year 1910, for officers and total enlisted of the Army.

61. Admissions to sick report, discharges, deaths, and noneffectiveness, with ratios per 1,000 of mean strength, for American troops, of the Army, white, colored, and total, for the year 1910.

62. Admissions to sick report, discharges, deaths, and noneffectiveness, with ratios per 1,000 of mean strength, for the year 1910, United States continental (excluding Alaska), and separately for white and colored troops serving therein.

63. Admissions to sick report, discharges, deaths, and noneffectiveness, with ratios per 1,000 of mean strength, for the year 1910, Alaska, Hawaii, and American troops serving in the Philippine Islands.

64. Admissions to sick report, discharges, deaths, and noneffectiveness, with ratios per 1,000 of mean strength, year 1910, for American troops on transports and for native Porto Rican and Filipino troops.

65. Total movement of sick for the United States Army at home compared with that of foreign armies.

66. A comparison of the admission and death rates of the United States Army at home for certain special diseases with those of foreign armies.

67. A comparison of the most important diseases by departments, United States.

68. Movement of sick, American troops of the Army, by years, 1906–1910.

TABLE No. 57.—*Surgical operations performed by officers of the Medical Corps on officers and enlisted men of the Army during the calendar year 1910.*

Operations.	Disease or injury.	Cases.	Result.				Anæsthetic.				
			Successful.	Partially successful.	Failure.	Died.	Chloroform.	Ether.	Chloroform and ether.	Local.	None.
	Eye.										
Enucleation	Rupture of eye	1	1					1			
Do	Foreign body, destroying eye.	1	1							1	
Do	Gunshot wound of eye	1	1					1			
Do	Punctured and infected wound of eye.	1	1				1				
Do	Total blindness	2	2					2			
Enucleation, and removal of piece of brass.	Penetrating wound of eye, with lodgment of foreign body.	1	1				1				
Iridectomy and extraction 3 Extraction of lens 1	Cataract	4	4							4	

TABLE No. 57.—*Surgical operations performed by officers of the Medical Corps on officers and enlisted men of the Army during the calendar year 1910*—Continued.

Operations.	Disease or injury.	Cases.	Result.				Anæsthetic.				
			Successful.	Partially successful.	Failure.	Died.	Chloroform.	Ether.	Chloroform and ether.	Local.	None.
	***Eye*—Continued.**										
Avulsion 1 Tucking operation 1 Excision 22 Transplantation 8 Desmarres's transplantation 2 Knapp's operation 2 McReynold's operation 2	Pterygium	38	37	1				2		36	
Shortening of internal rectus 2 Tenotomy of internal rectus 4	Strabismus	6	6							6	
Do	Squint, left esophoria	2	1	1						2	
Incision and passing of sounds 1 Incision and drainage 2	Dacryocystitis	3	3							2	1
Slitting of canaliculus and irrigation of sac.	Stricture of canaliculus	1	1							1	
Plastic	Scar 2½ inches long, lower lid, with partial loss of same.	1	1					1			
Modified Arlt's operation	Symblepharon	1	1							1	
Expression	Trachoma	2	2					1		1	
Expression with Knapp's forceps.	Follicular conjunctivitis	4	4							4	
Excision	Gelatinous cyst eyeball	1	1							1	
Incision and curetment	Chalazion	9	9							9	
Excision	Meibomian cyst	4	4							3	1
Extirpation and cauterization.	Papilloma outer canthus	1	1							1	
Excision and drainage	Dermoid cyst, lid	1	1				1				
Excision	Sebaceous cyst, lid	1	1							1	
Extraction	Foreign body embedded in cornea.	2	2							2	
	***Ear*.**										
Mastoidotomy curetment and drainage.	Mastoiditis	7	7				4	2		1	
Incision of tympanum 14 Paracentesis 4	Acute otitis media	18	18				2			11	5
Incision curetment and drainage.	Acute otitis externa	1	1				1				
Dissection of obstructing diaphragm.	Obstructed auditory meatus.	1		1				1			
Incision and drainage	Abscess, external ear	3	3								3
Incision and removal	Calcified cyst, pinna of ear	1	1							1	
	***Nose*.**										
Refracture of septum, with correction of deformity.	Deformity of nose, following compound fracture of both nasal bones.	1	1					1			
Incision and curetment	Necrosis of nasal bones	1	1					1			
Opening chiseled into antrum.	Infection antrum of Highmore.	1	1					1			
Incision and drainage	Inflammation antrum of Highmore.	1	1					1			
Do	Empyema antrum of Highmore.	1	1							1	
Projecting portion excised and bone straightened 1 Submucous resection 7	Deflection of septum	8	8							8	
Do	Deviation of septum	9	9							9	
Removal with snare	Enchondrosis of septum	1	1							1	
Excision	Exostosis of septum	1	1							1	
Submucous resection	Cystic septum	1	1							1	

TABLE No. 57.—*Surgical operations performed by officers of the Medical Corps on officers and enlisted men of the Army during the calendar year 1910*—Continued.

Operations.	Disease or injury.	Cases.	Result.			Anæsthetic.				
			Successful.	Partially successful.	Failure.	Died.	Chloroform.	Ether.	Chloroform and ether.	Local.	None.
	Nose—Continued.										
Removal with saw 2 Excision 7 Cauterization 2 Submucous resection 4	Hypertrophy of turbinates	11	11							11	
Removal with saw 2 Excision 2	Nasal spur	8	8							8	
Removal with snare 4 Removal by torsion 1	Polypus	5	5					1		4	
Incision and drainage	Abscess of nasal fossa	1	1								1
Do	Abscess of ala	1	1							1	
Excision 3 Excision with curet and forceps 1 Curetment 4	Adenoids, post-nasal	8	8					3		5	
	Mouth pharynx and esophagus.										
Excision	Fibrous tumor lower lip, nature undetermined.	1	1							1	
Incision and drainage	Parotitis, acute suppurative.	1	1							1	
Do	Salivary fistula	1	1					1			
Excision	Submaxillary adenitis	2	2					1	1		
Incision and drainage	Submaxillary abscess	1	1				1				
Division of frenum	Tongue-tie	1	1							1	
Incision and drainage	Ludwig's angina	2	2					1		1	
Excision by dissection 3 Tonsillectomy 60	Tonsillitis	63	63				7	8		38	10
Excision by dissection 2 Tonsillectomy 128	Chronic hypertrophy of the tonsils.	130	130							103	27
Excision by dissection	Tuberculous tonsil	1	1							1	
Enucleation	Infected tonsillar crypt	2	2							2	
Excision	Adenoids	22	22				8	8		6	
	Neck and thorax.										
Ligation of vessels	Incision of throat (suicidal)	3	3					1			2
Tracheotomy	Laryngeal diphtheria	1	1							1	
Do	Edema of glottis	1	1								1
Laminectomy, no bullet found.	Gunshot wound penetrating neck, above left sterno-clavicular articulation.	1				1		1			
Thoracotomy 1 Paracentesis 3 Aspiration 15	Pleurisy	19	18	1				1		17	1
Paracentesis	Pleurisy, traumatic	1	1							1	
Aspiration	Pleurisy, tuberculous, with effusion.	7	7							7	
Excision of ninth rib, and drainage.	Supradiaphragmatic abscess.	1	1				1				
Thoracotomy	Empyema	2	2				1	1			
Aspiration	Empyema, tuberculous	1	1							1	
Do	Carcinoma of lung	1	1							1	
Paracentesis	Pericarditis	1				1				1	
Thoracotomy 1 Cleansing and packing 1	Gunshot wound of chest	2	1			1		1			1
Suturing and drainage	Penetrating wound of chest	1	1					1			
Aspiration	Hæmothorax following penetrating wound.	1	1							1	

TABLE No. 57.—*Surgical operations performed by officers of the Medical Corps on officers and enlisted men of the Army during the calendar year 1910*—Continued.

Operations.	Disease or injury.	Cases.	Result.				Anæsthetic.				
			Successful.	Partially successful.	Failure.	Died.	Chloroform.	Ether.	Chloroform and ether.	Local.	None.
	Abdomen.										
Excision of necrosed ends of ninth rib following primary excision, pleurodiaphragmatic drainage 1 Exploratory laparotomy. 3 Laparotomy and drainage 11 Exploratory laparotomy for localization, resection of tenth rib and evacuation of pus through pleurodiaphragmatic incision into liver 2	Abscess of liver	17	15	...	1	1	5	12	...	...	...
Exploratory laparotomy and breaking up of adhesions 1 Exploratory laparotomy. 3 Aspiration 2	Suspected abscess of liver	6	4	1	1	...	...	4	...	2	...
Laparotomy and drainage of liver.	Hepatitis	1	1	...	...	...	...	1	...	...	...
Exploratory laparotomy	Hepatitis, nonsuppurative	2	2	...	...	...	...	2	...	...	...
Do	Cirrhosis of the liver	1	1	...	...	...	...	1	...	...	...
Exploratory incision 1 Cholecystotomy 11	Cholecystitis	12	11	...	...	1	2	10	...	...	...
Cholecystotomy	Cholelithiasis	2	1	...	...	1	...	2	...	...	...
Exploratory laparotomy	Suspected disease of gall bladder.	1	1	...	...	...	...	1	...	...	...
Appendectomy and excision of growth from cecum 1 Appendectomy 252	Appendicitis (7 tuberculous).	253	246	1	...	[1]6	12	233	8	...	...
Laparotomy and drainage	Appendiceal abscess (2 tuberculous).	13	12	...	1	...	...	13	...	...	...
Laparotomy and removal of obstruction.	Intestinal obstruction following an appendectomy.	1	1	...	...	...	...	1	...	...	...
Ilio-colostomy, Moynihan. 1 Drainage of tract 1 Laparotomy and partial dissection of tract 1 Exploratory laparotomy 1	Fecal fistula following an appendectomy.	3	2	1	...	...	...	3	...	...	...
Laparotomy and freeing of adhesions 3 Appendicostomy 1	Adhesions after appendicitis.	4	4	...	...	...	...	4	...	...	...
Reduplication of tendon 1 Andrew's operation 1 Bassini's operation 131 Bassini's modified operation 21 Ferguson's operation 7 Ferguson's modified operation 6 Halstead's operation 4 Operation not stated 6	Dysentery, amœbic	1	...	...	1	...	...	1	...	...	...
	Inguinal hernia	177	177	...	...	...	9	163	5	...	...
Dissecting out scar, and suturing together sides of opening in deep tissues.	Inguinal hernia, recurrent	1	1	...	...	...	...	1	...	...	...
Excision of adherent omentum, and transverse overlapping of fascia 1 Excision of scar tissue and ligation of sac 1 Mayo's operation 1 Mayo's modified operation 1 Ferguson's operation 1 Plastic operation 4 Operation not stated 4	Ventral hernia	13	13	...	...	...	3	10	...	...	...

[1] 1 died of chloroform anæsthesia.

TABLE No. 57.—*Surgical operations performed by officers of the Medical Corps on officers and enlisted men of the Army during the calendar year 1910*—Continued.

Operations.	Disease or injury.	Cases.	Result.			Anæsthetic.				
			Successful.	Partially successful.	Failure.	Died.	Chloroform.	Ether.	Chloroform and ether.	Local.	None.
	Abdomen—Continued.										
Bassini's operation	Femoral hernia	4	4					4			
Abominal section	Gunshot wound of abdomen	1				1					1
Incision of abdominal cavity and drainage.	do	1	1					1			
Modified Bevans's incision through right rectus, suture of wounds in liver, and drainage.	do	1				1		1			
Resection tenth rib, incision through pleura and diaphragm, and drainage.	do	1	1					1			
Incision and exploration	Gunshot wound of abdomen, nonpenetrating.	1	1					1			
Exploratory laparotomy	Stab wound of abdomen	1	1					1			
Suturing of intestines	do	1	1					1			
Gastro-enterostomy	Tumor of pylorus	1	1					1			
Laparotomy and excision	Lipoma, intraperitoneal	1	1					1			
Exploratory laparotomy	Carcinoma of liver	1	1					1			
Do	Carcinoma, general abdominal.	2			2			2			
Resection of first 3 inches of descending colon, anastomosis with Murphy button, and reenforcing sutures and drainage.	Fibrous tumor, with partial stricture of colon.	1				1		1			
Laparotomy and drainage	General septic peritonitis	1				1		1			
Do	Diffuse peritonitis	1				1		1			
Do 1 Reopening wound, repair of intestines, and drainage 1	Acute peritonitis	2	1			1		2			
Gastro-enterostomy	Gastric ulcer	1	1					1			
Laparotomy repair and drainage.	Perforating gastric ulcer	2	1			1	1	1			
Gastro-enterostomy	Duodenal ulcer, with adhesions.	1				1		1			
Gastro-jejunostomy, Mayo's	do	2	2					2			
Laparotomy and repair	Perforating ulcer of intestine, incident to typhoid fever.	1	1					1			
Artificial anus established by fixing bowel opening to opening in abdominal wall.	Perforating ulcer, hepatic flexure of colon, of dysenteric origin.	1	1					1			
Laparotomy and drainage	Peritonitis following ulceration and perforation of colon.	1	1					1			
Laparotomy for enterostomy.	Peritonitis, and general thrombosis of inferior mesenteric artery.	1				1		1			
Exploratory laparotomy	Pancreatitis, hemorrhagic	1				1		1			
Laparotomy	Adenitis ilio-pelvic glands	1		1				1			
Abdominal section and drainage.	Abscess between bladder and rectum, with mechanical obstruction.	1	1						1		
Laparotomy, evacuation, and drainage.	Abscess, subphrenic	1	1					1			
Entero-enterostomy	Fecal fistula	1	1					1			
Fistula dissected out and intestine closed in by suturing.	Fecal fistula, following previous operation for perforated hepatic flexure of colon.	1	1					1			
Laparotomy and repair	Fecal fistula following operation for perforation of intestine.	2		1	1		2				
Laparotomy	Intestinal obstruction	1	1					1			
Paracentesis	Ascites	1	1							1	

TABLE No. 57.—*Surgical operations performed by officers of the Medical Corps on officers and enlisted men of the Army during the calendar year 1910*—Continued.

Operations.	Disease or injury.	Cases.	Result.				Anæsthetic.				
			Successful.	Partially successful.	Failure.	Died.	Chloroform.	Ether.	Chloroform and ether.	Local.	None.
	Anus and rectum.										
Incision and curetment	Abscess of rectum	2	2					1			1
Incision and drainage		1									
Dilatation and cauterization	Ulcer of rectum	2	2					2			
Incision and curetment	Fistula of rectum	2	2					2			
Incision and drainage	Ischio-rectal abscess	26	30				2	12		13	3
Incision, curetment, and drainage		4									
Excision and free opening	Ischio-rectal fistula	2	2							2	
Excision	Peri-rectal sinus	1	1					1			
Forced dilatation	Fissure of anus	2	3				1	2			
Dilatation and cauterization		1									
Dilatation	Ulcer of anus	1			1				1		
Incision and curetment, and excision of glands	Fistula in ano, and tuberculous adenitis of rectum	1	1					1			
Excision and curetment	Fistula in ano	28	45	1	1		4	28		11	2
Excision and drainage		16									
Excision and suturing		1									
Excision	Condylomata of anus	3	8				1	3	1	3	
Clamp and cautery		1									
Cauterization		2									
Ligation, excision, and cauterization		2									
Excision	Papillomata, soft, around anus	1		1			1				
Allingham's operation	Hemorrhoids	7	304	303	1		38	172	9	80	5
Kaller's operation		1									
Mitchell's operation		1									
Pilcher's operation		15									
Schede's operation		2									
Whitehead's operation		6									
Clamp and cautery		74									
Clamp, excision, and ligation		13									
Excision		59									
Ligation and excision		64									
Ligation		17									
Incision and removal of clot		25									
Incision and cauterization		1									
Excision and cauterization		3									
Excision and suture		7									
Incision and curetment		6									
Incision and ligation		1									
Incision and packing		1									
Ligation and cauterization		1									
Removal by dissection and ligation	Hemorrhoids, internal, with prolapse and strangulation	1	1					1			
Cauterization and freshening of surface	Numerous excoriations about anus, and internal and external sphincters	1	1						1		
	Genito-urinary system.										
Nephrectomy	Pyelonephrosis	1	1					1			
Opening down to kidney, dissecting out scar, and removal of two small calculi	Lumbar fistula, result of operation for renal calculus	1	1					1			
Incision and drainage	Perinephritic abscess	1	2					2			
Edebohl's incision		1									
Laparotomy and cystorrhaphy	Rupture of bladder	1	1					1			

TABLE No. 57.—*Surgical operations performed by officers of the Medical Corps on officers and enlisted men of the Army during the calendar year 1910*—Continued.

Operations.	Disease or injury.	Cases.	Result.				Anæsthetic.				
			Successful.	Partially successful.	Failure.	Died.	Chloroform.	Ether.	Chloroform and ether.	Local.	None.
	Genito-urinary system—Contd.										
Prostatotomy	Prostatitis	2	2					2			
Perineal cystotomy		1									
Do	Hypertrophy of prostate	1	1					1			
Perineal incision and drainage	Abscess of prostate (1 gonorrheal)	4	4					3		1	
Prostatectomy		1									
Incision, curetment, and packing	Abscess, perineal	3	3				1	1		1	
Incision and drainage		2									
Bennett's operation		3									
Blech's operation		1									
Bloodgood's operation		9									
High excision		83									
Scrotal excision		4									
Median incision and excision	Varicocele	6	184				19	127	12	26	
High ligation		1									
Low ligation		5									
Excision and ligation, site not stated		20									
Excision, site not stated		51									
Radical cure		1									
Andrews's operation		4									
Jaboulay's operation		2									
Bassini's operation		2									
Levi's operation		1									
Volkman's operation		1									
Von Bergman's operation		1									
Bottle operation		3									
Excision of sac		7									
Inversion of sac		2									
Incision and obliteration	Hydrocele	1	44	41	2	1	8	21		5	10
Incision and drainage		2									
High operation		3									
Tunica button-holed and inverted over testicle		1									
Aspiration		1									
Aspiration and injection		1									
Paracentesis		3									
Tapping		9									
Incision and drainage		4									
Hagner's operation	Epididymitis	1	11	11				9		2	
Epididymectomy		6									
Orchidectomy	Necrotic gumma of testicle	1	1					1			
Do	Atrophy of testicle	1	1					1			
Do	Orchitis chronic (1 tuberculous)	4	3		1		2	2			
Incision and curetment		2									
Orchidectomy	Tuberculosis of testicle	2	2					2			
Do	Epidymitis, chronic (1 tuberculous)	2	2					2			
Incision of sac	Hematocele	1	1					1			
Incision and drainage	Abscess periurethral	14	14				1	3		7	3
Incision and curetment	Sinus, urethral	2	2				1			1	
Forcible dilatation	Stricture of urethra	10	10				2	4			4
Internal urethrotomy		2									
External urethrotomy		1									
Do		1									
Operation for closure	Fistula of urethra	2	2					1		1	
Meatotomy	Keloid head of penis	1	1							1	
Plastic	Hypospadias	1	1							1	
Circumcision	Phimosis and paraphimosis 187; Elongated prepuce, and redundant prepuce 180; Venereal disease 26; Other disease of prepuce 9; Mutilation of prepuce 1	403	402	1			22	54	1	310	16

TABLE No. 57.—*Surgical operations performed by officers of the Medical Corps on officers and enlisted men of the Army during the calendar year 1910*—Continued.

Operations.	Disease or injury.	Cases.	Result.				Anæsthetic.				
			Successful.	Partially successful.	Failure.	Died.	Chloroform.	Ether.	Chloroform and ether.	Local.	None.
	Genito-urinary system—Contd.										
Excision of all gangrenous tissue, and drainage.	Cellulitis, acute septic, penis and scrotum.	1	1	...	...	...	...	1	...	...	...
Resection of scrotum	Elongated scrotum	1	1	...	...	...	...	1	...	...	...
Incision and drainage	Abscess of scrotum	2	2	...	...	...	...	1	...	1	...
	Vascular system.										
Bryant's thoracotomy	Atheroma arch of aorta	1	1	...	...	...	...	1	...	...	...
Ligation of artery	Severed temporal artery	1	1	...	...	...	1	...	...	...	...
Do	Severed radial artery	1	1	...	...	...	...	1	...	...	...
Do	Gunshot wound severing palmar arch.	1	1	...	...	...	...	1	...	...	...
Incision and suture	Venous aneurism	1	1	...	...	...	...	1	...	...	...
Excision of vein	Phlebitis, great saphenous vein.	1	1	...	...	...	...	1	...	...	...
Schede's operation 2 Keller's operation 6 Mayo's operation 2 Excision 23 Excision and ligation 9 Ligation 9 Multiple incisions 4 Multiple ligation 3	Varicose veins	58	58	...	...	...	7	45	...	6	...
	Nervous system.										
Schwartz modified depressive operation.	Cerebral meningitis, acute	1	1	...	...	...	...	1	...	...	...
	Skin and cellular tissue.										
Incision and drainage 48 Incision, curetment, and drainage 5 Multiple incisions 1	Cellulitis	54	48	3	2	[1]1	4	2	2	23	23
Incision and drainage	Streptococcus infection	3	2	1	...	...	...	2	...	1	...
Incision and curetment 14 Incision and drainage 314	Abscess	328	327	...	1	...	5	18	...	148	157
Incision and curetment 1 Incision and drainage 2	Tuberculous abscess	3	3	...	...	...	1	...	...	2	...
Incision and curetment 2 Incision and drainage 16	Carbuncle	18	18	...	...	...	3	1	...	11	3
Do	Felon and whitlow	9	8	...	1	...	...	...	...	3	6
Excision and curetment	Sinus	3	3	...	...	...	...	...	...	3	...
Incision and curetment	Fistula	2	2	...	...	...	...	...	...	1	1
Curetment	Indolent ulcer	1	1	...	...	...	...	1	...	...	...
Excision	Callus	2	2	...	...	...	1	1	...	...	...
Do	Keloid	3	3	...	...	...	1	1	...	1	...
Do	Nevus	1	1	...	...	...	...	...	...	...	1
Do	Pigmented mole	2	2	...	...	...	...	...	...	2	...
Abscision	Tattoo mark	1	1	...	...	...	...	...	...	...	1
Anger's operation 12 Cotting's operation 32 Keller's operation 16 Van Meter's operation 1 Excision 159 Avulsion 15 Partial excision 8 Excision and cauterization 1 Excision, inner and outer borders 9	Ingrowing toe nails	253	251	2	...	...	2	4	...	244	3
Excision	Hooked nail	6	6	...	...	...	...	1	...	2	3
Do	Cartilaginous growth, nail great toe.	1	1	...	...	...	...	...	...	1	...
Incision 1 Excision of web 1	Syndactylism	2	1	1	...	...	...	...	...	2	...

[1] Died of septicemia.

TABLE NO. 57.—*Surgical operations performed by officers of the Medical Corps on officers and enlisted men of the Army during the calendar year 1910*—Continued.

Operations.	Disease or injury.	Cases.	Result.				Anæsthetic.				
			Successful.	Partially successful.*	Failure.	Died.	Chloroform.	Ether.	Chloroform and ether.	Local.	None.
	Lymphatic glands.										
Excision of anterior cervical chain. 1 Incision and drainage. 1 Excision of gland. 8 Keller's operation. 3	Adenitis tuberculous	10	10					6	1	3	
Excision of gland. 211 Incision and drainage. 322 Incision and curetment. 75 Curetment and drainage 1 Incision, curetment, and injection with iodoform emulsion. 10	Adenitis, inguinal venereal. 566 Adenitis, inguinal nonvenereal. 64 Adenitis, inguinal, nature not stated. 23	653	650	2	1		39	180	5	338	91
Excision of gland	Adenitis femoral venereal	1	1				1				
Do	Adenitis femoral nonvenereal	1	1				1				
		1	1				1				
Excision of gland. 3 Incision and drainage. 2	Adenitis cervical, nature not stated.	5	5				2	1	1		1
Do	Adenitis axillary, nature not stated.	5	5					1	2	2	
Do	Adenitis femoral, nature not stated.	1	1				1				
Incision and curetment	Adenitis venereal, site not stated.	2	2							2	
Keller's operation. 10 Excision of gland. 56 Incision and drainage. 19	Adenitis, nature and site not stated	85	85				12	36		34	3
	Muscles, tendons, fasciæ, ligaments, and bursæ.										
Keller's operation. 3 Excision of bony enlargement. 9 Partial resection of metatarsal. 2 Excision of bursa and proximal end of first phalanx. 4 Aspiration. 2 Excision. 1 Incision and drainage. 3 Incision, curetment, drainage, and packing. 1 Draining with trocar and canula. 1	Bunion	18	17	1			2	13		2	1
Excision	Bursitis	8	7	1			1	1		3	3
Excision	Bursa	1	1					1			
Do	Ganglion	5	5					2		3	
Resection of tibialis anticus muscle.	Rupture, sheath of muscle.	1	1					1			
Suturing	Severed muscle	1	1							1	
Tenorrhaphy	Severed tendon	15	14	1			4	7		2	2
Excision	Hypertrophied tendon	2	2					2			
Incision and extension	Contracture of finger	1	1							1	
Suturing of tendon	Defective extension of toe	1	1					1			
	Bones.										
Trephining and ligation of meningeal artery.	Fracture of skull, with hemorrhage.	1	1					1			
Cushing's decompression with removal of clot.	Fracture base of skull, with subdural hemorrhage.	1				1		1			
Removal of circular area from around fracture, and fragments from dura.	Compound comminuted fracture of skull ¾-inch diameter above superciliary ridge.	1				1		1			
Trephining and removal of depressed bone.	Compound depressed fracture of skull.	1	1					1			
Elevation of depressed fragments.	Fracture of skull	1	1					1			
Exploratory trephining	Old fracture parietal region	1	1					1			

TABLE No. 57.—*Surgical operations performed by officers of the Medical Corps on officers and enlisted men of the Army during the calendar year 1910*—Continued.

Operations.	Disease or injury.	Cases.	Result.			Anæsthetic.				
			Successful.	Partially successful.	Failure.	Died.	Chloroform.	Ether.	Chloroform and ether.	Local.	None.
	Bones—Continued.										
Removal of necrosed outer table.	Necrosis outer table frontal and both parietal bones.	1			1			1			
Removal of necrosed outer table (2½ inches diameter) over frontal and parietal bones.	Necrosis outer table frontal and both parietal bones.	1			1			1			
Laminectomy	Gunshot wound of vertebra.	1				1		1			
Chipping away of fractured vertebræ, and removal of small fragments from contact with cord.	Fracture of spine, tenth, eleventh, and twelfth dorsal, with compression of cord.	1			1			1			
Setting fracture, and wiring of fragments.	Fracture of lower jaw	6	6				1	2		1	2
Incision and drainage	Periostitis inferior maxilla	1	1							1	
Incision and curetment	Necrosis inferior maxilla	1	1					1			
Incision, removal of bullet, fine particles of bone, and drainage.	Gunshot wound, surgical neck of humerus.	1	1				1				
Osteotomy	Osteo-myelitis, humerus	1	1					1			
Removal head of radius, and fragments.	Compound fracture upper end radius.	1	1				1				
Resection and wiring of bone.	Gunshot wound, radius	1	1					1			
Incision and removal of detached bone.	Abscess of elbow, caused by detached bone.	1	1							1	
Exploratory incision	Suspected necrosis of radius.	1			1			1			
Removal of spicula of bone from styloid process of ulna.	Partial loss of function of radius following Colles fracture.	1	1							1	
Excision of fragments, and pisiform bone.	Fracture and displacement styloid process of ulna.	1	1					1			
Resection of manubrium, curetment of bone, and drainage of cavity.	Tuberculosis of manubrium.	1	1					1			
Curetment	Osteitis of rib	1	1					1			
Resection ends of bone, and wiring 2 Wiring of ununited fracture 1	Fracture of femur	3	3				1	2			
Osteotomy	Exostosis, external condyle femur.	1	1					1			
Wiring of fragments 5 Lavage of joint, and suture of patella 1 Wiring of fracture, open method 2	Fracture of patella	8	8					7		1	
Incision and wiring	Fracture of tibia	1	1					1			
Removal of bullet, and loose fragments of bone.	Gunshot wound ankle, and fracture of tibia.	1	1				1				
Ligation of fragments	Fracture of tibia and fibula	1	1						1		
Removal of eburnated ends of tibia, approximated ends of fragments held in position by metal plate, resection 3 c. m. fibula upper third.	Ununited fracture of tibia	1			1			1			
Resection eburnated ends of tibia, and fragments held in place with metal plate.	Ununited fracture tibia and fibula.	1			1			1			
Removal portion of cortex of tibia.	Osteo-periostitis tibia	1			1			1			
Removal of sequestra	Crushing of leg	1	1				1				
Exploratory operation	Necrosis of tibia	1	1				1				
Ends of tibia freshened, and ends of fibula resected and wired.	Ununited fracture, both bones of leg.	1	1					1			

TABLE No. 57.—*Surgical operations performed by officers of the Medical Corps on officers and enlisted men of the Army during the calendar year 1910*—Continued.

Operations.	Disease or injury.	Cases.	Result.				Anæsthetic.				
			Successful.	Partially successful.	Failure.	Died.	Chloroform.	Ether.	Chloroform and ether.	Local.	None.
	Bones—Continued.										
Ends of tibia sawn off, and brought together with kangaroo tendon.	Ununited fracture, both bones of leg.	1	1					1			
Incision, and reduction of fragments.	Fracture of tibia	1	1					1			
Incision, and removal of nodes.	Nodes of tibia multiple, middle third.	1			1			1			
Incision and drainage	Periostitis of tibia	1	1							1	
Osteotomy and removal of oscalcis.	Necrosis right and left tibia, and right oscalcis.	1	1				1				
Removal of sequestrum, and curetment of bone cavity.	Osteo-myelitis oscalcis	1	1					1			
Excision of loose fragments	Fracture of scaphoid	1		1				1			
Excisions, and fixation of foot in inverted position.	.....do	2	2					2			
Excision of callus	Bony callus great toe	1		1			1				
Curetment and drainage	Necrosis metacarpal bone	1	1					1			
Osteotomy	Deformity following fracture of metacarpal.	1		1				1			
Resection	Vicious union following fracture of metacarpal bone.	1	1							1	
Resection second phalanx	Gunshot wound index finger.	1	1					1			
Resection whole of upper third.	Necrosis of fibula	1			1			1			
Curetment 3 Removal with chisel 1 Removal of necrotic area 1	Necrosis, bone not stated	6	5		1		1	5			
Incision into thigh	Exostosis of femur	1	1					1			
Removal	Exostosis multiple both knees.	1	1					1			
Resection first phalanx	Exostosis plantar surface great toe.	1	1					1			
Osteotomy	Exostosis bone not stated	6	6				1	4		1	
	Joints.										
Excision of callus	Partial ankylosis elbow joint, following fracture.	1	1					1			
Reduction and suturing	Compound dislocation phalangeal joint thumb.	1		1				1			
Lengthening of tendon, and stitching to stump of same tendon.	Stiff wrist following bolo wound.	1	1					1			
Excision of carpal scaphoid	Ankylosis wrist joint	1	1					1			
Exploratory operation	Poor flexion wrist joint	1	1					1			
Lengthening tendon of biceps.	Loss of elbow joint by resection.	1	1					1			
Partial freeing of adhesions	Partial ankylosis, metacarpo-phalangeal.	1		1			1				
Exploratory operation	Recurrent dislocation of hip joint.	1	1					1			
Lateral plication of capsular ligament below joint and suturing.	Partial dislocation knee, due probably to rupture of crucial and capsular ligaments.	1			1			1			
Exploration of joint and suture.	Rupture of internal and capsular ligaments.	1	1				1				
Arthrotomy; removal of foreign body, excision of eroded articular surfaces, and evacuation of fluid.	Arthritis, acute, knee joint, with effusion.	1	1					1			
Incision and drainage	Arthritis knee joint, gonorrheal.	1	1							1	
Shortening of patellar tendon by plication.	Habitual dislocation of patella.	1	1					1			
Aspiration 2 Arthrotomy 1	Synovitis knee joint	3	3				1				2

TABLE No. 57.—*Surgical operations performed by officers of the Medical Corps on officers and enlisted men of the Army during the calendar year 1910*—Continued.

Operations.	Disease or injury.	Cases.	Result.				Anæsthetic.				
			Successful.	Partially successful.	Failure.	Died.	Chloroform.	Ether.	Chloroform and ether.	Local.	None.
	Joints—Continued.										
Excision of cartilage..... 2 Arthrotomy..... 1	Floating cartilage knee joint.	3	3	...	...	...	....	1	....	2	...
Excision of cartilage.....	Partially detached semilunar cartilage.	2	2	...	...	...	....	2	....	.....	...
Incision and curetment.....	Arthritis tuberculous, joint not stated.	2	1	1	...	...	....	2	....	.....	...
Exploratory incision..... 1 Incision and drainage..... 1	Synovitis, joint not stated...	2	2	...	...	...	1	.....	....	1	...
May's modified operation. 2 Weir's operation..... 2 Excision of exostosis..... 4 Excision of exostosis and resection of proximal end first phalanx great toe..... 2	Hallux valgus.....	10	10	...	...	...	1	9	....	.....	...
Incision under surface of toe..... 1 Tenotomy..... 1 Resection of bone..... 1	Hammer toe.....	3	3	...	...	...	....	1	....	2	...
Plastic operation.....	Overlapping little toe	1	1	...	...	...	....	1	....	.....	...
Excision head of fourth metatarsal bone.	Ankylosis metatarso-phalangeal joint.	1	1	...	...	...	1	.....	....	.....	...
	Amputations.										
Amputation thigh, middle third.	Compound comminuted fracture of femur, wound gangrenous.	1	.....	...	1	...	....	1	....	.....	...
Amputation thigh, upper third.	.....do.....	1	.....	...	...	1	....	1	....	.....	...
Amputation thigh, site not stated.	Osteo-myelitis, upper third of tibia and lower third femur.	1	1	...	...	...	....	1	....	.....	...
Amputation thigh, middle third.	Recurrent sarcoma, knee....	1	1	...	...	...	....	1	....	.....	...
Amputation thigh, junction upper and middle thirds.	Gangrene of leg, traumatic..	1	1	...	...	...	....	1	....	.....	...
Amputation leg, junction upper and middle thirds.	Ununited fracture of tibia...	1	1	...	...	...	....	1	....	.....	...
Amputation leg, middle third.	Ununited fracture both bones leg.	1	1	...	...	...	....	1	....	.....	...
Do.....	Compound fracture, infected	1	1	...	...	...	....	1	....	.....	...
Do.....	Crushing of leg by car.....	1	1	...	...	...	....	1	....	.....	...
Amputation leg, site not stated.	Gunshot wound.....	1	1	...	...	...	.....	.....	1	.....	...
Do.....	Necrosis.....	1	1	...	...	...	....	1	....	.....	...
Amputation leg, Seidellot's method.	Gangrene of foot.....	1	1	...	...	...	....	1	....	.....	...
Amputation foot.....	Necrosis.....	1	1	...	...	...	.....	.....	1	.....	...
Amputation foot, Forbes....	Crushing of foot.....	1	1	...	...	...	....	1	....	.....	...
Amputation of all the toes, phalangeal disarticulation.	.....do.....	1	.....	...	1	...	1	.....	....	.....	...
Amputation of finger.....	Gunshot wound..... 4 Injury..... 23 Gangrene traumatic..... 1 Ankylosis..... 2 Dupuytren's contraction 2 Deformity..... 1 Disease..... 3 Cause not stated..... 2	38	38	...	...	...	9	16	....	13	...
Amputation of toe.....	Frozen toes..... 2 Gunshot wounds..... 2 Other injury..... 3 Hammer toe..... 8 Over-lapping toe..... 2 Deformity..... 1 Corn..... 1 Supernumerary..... 1 Disease..... 5 Cause not stated..... 2	27	26	...	1	...	5	11	....	9	2

TABLE No. 57.—*Surgical operations performed by officers of the Medical Corps on officers and enlisted men of the Army during the calendar year 1910*—Continued.

Operations.	Disease or injury.	Cases.	Result.				Anæsthetic.				
			Successful.	Partially successful.	Failure.	Died.	Chloroform.	Ether.	Chloroform and ether.	Local.	None.
	Foreign bodies.										
Extraction	Bullet, 18; jacket of bullet, 2; piece of shell, 2; piece of cartridge case, 1; piece of grenade, 1; piece of steel, 1; piece of lead, 1; piece of brass, 1; piece of glass, 2; broken needle, 1; broken hypodermic needle, 1; body not stated, 6.	37	36	....	1	....	2	7	....	25	3
	Tumors.										
Excision	Adenoma	2	2	....	....	....	....	1	....	1	....
Excision of growth and capsule.	Adeno-enchondroma	1	1	....	....	....	....	1	....	....	....
Excision	Angioma	2	2	....	....	....	....	2	....	....	....
Do	Chondroma	1	1	....	....	....	....	....	....	1	....
Do	Cyst	4	4	....	....	....	....	1	....	3	....
Incision and drainage 1 Excision 1	Cystic tumor	2	2	....	....	....	....	....	1	1	....
Do	Dermoid cyst	4	4	....	....	....	2	1	....	1	....
Do	Fibroma	5	5	....	....	....	1	2	....	2	....
Do	Fibro-lipoma	1	1	....	....	....	....	1	....	....	....
Do	Fibro-myoma	1	1	....	....	....	....	1	....	....	....
Incision and removal of clot	Hematoma	2	2	....	....	....	....	....	....	1	1
Evacuation	Hemorrhagic tumor	1	1	....	....	....	....	1	....	....	....
Excision	Lipoma	14	14	....	....	....	....	7	....	7	....
Excision and removal of cyst wall.	Mucous cyst	2	2	....	....	....	....	....	....	1	1
Excision	Neuro-fibroma	2	2	....	....	....	....	....	....	2	....
Do	Osseous tumor	1	1	....	....	....	....	....	....	1	....
Do	Papilloma	5	5	....	....	....	....	1	....	4	....
Do	Pilonidal cyst	1	1	....	....	....	....	....	....	1	....
Incision and curetment 5 Excision 55	Sebaceous cyst	60	60	....	....	....	1	3	....	51	5
Amputation of breast	Tumor of breast, unclassified	1	1	....	....	....	1	....	....	....	....
Excision	Tumor, cartilaginous, palm of hand.	1	1	....	....	....	....	1	....	....	....
Do	Tumor, unclassified	3	3	....	....	....	....	1	....	2	....
Excision through popliteal incision.	Cystic sarcoma, right leg	1	....	....	1	....	....	1	....	....	....
Excision	Epithelioma	1	1	....	....	....	1	....	....	....	....
	Plastic surgery.										
Plastic for repair of extensive injuries.	Incised wounds severe	3	3	....	....	....	1	1	....	....	1
Skin grafting	Ulcerated area	1	1	....	....	....	....	....	....	1	....
Do	Gunshot wound, lacerated	2	2	....	....	....	....	2	....	....	....
Excision of discolored parts, followed plastic operation.	Discolored scars	1	1	....	....	....	....	....	....	1	....
	Miscellaneous.										
Incision and drainage	Infected wound	25	24	1	..	....	1	10	....	5	9
Suturing	Incised wound	47	47	....	..	....	....	....	....	7	40
Do	Lacerated wound	50	50	....	..	....	1	....	....	4	45
Incision and curetment 2 Incision and drainage 4 Incision and cauterization 4	Punctured wound	10	10	....	..	....	....	1	....	3	6
Suturing	Scalp wound	4	4	....	..	....	....	....	....	....	4
Wiring of teeth, suturing wound of lip and chin, supra-pubic cystotomy, drainage peri-vesical, suturing of bladder wall to skin, closure of wound, supra-pubic drainage of bladder and peri-vesical spaces, reduction of Colles fracture, and fracture of right femur.	Fractures, multiple, and rupture of bladder.	1	1	....	..	....	....	1	....	....	....
Ligation of artery and suturing of muscles.	Multiple incised wounds, forearm severing muscles and radial artery.	1	1	....	..	....	....	1	....	....	....
Total number of cases		4,175	4,082	34	32	27	296	1,513	55	1,793	518

TABLE NO. 58—*Numerical view of the effect of disease and injury on United States troops serving at home and abroad in the year 1910 compared with corresponding data for the year 1909, by races.*

ABSOLUTE NUMBERS.

		Mean strength.	Admitted.			Discharged on certificate of disability.			Died.			Total losses.			Noneffective from sickness.	
			Total.	Disease.	Injury.	Total.	Disease.	Injury.	Total.	Disease.	Injury.	Total.	Disease.	Injury.	Days treated.	Constantly noneffective.
White troops	1910	68,548	65,469	52,938	12,531	970	867	103	298	162	136	1,268	1,029	239	906,909	2,484.68
	1909	71,025	75,824	61,739	14,085	1,213	1,093	120	346	210	136	1,559	1,303	256	1,076,108	2,948.24
Colored troops	1910	2,986	2,471	1,861	610	37	34	3	22	13	9	59	47	12	31,301	85.76
	1909	3,294	3,176	2,615	561	57	53	4	24	18	6	81	71	10	49,225	134.86
Porto Rican troops	1910	591	563	487	76	9	4	5	.....	.....	.....	9	4	5	6,899	18.90
	1909	567	674	617	57	6	5	1	7	4	3	13	9	4	8,906	24.40
Filipino troops	1910	5,093	4,462	3,809	653	36	32	4	23	19	4	59	51	8	48,342	132.44
	1909	5,369	5,036	4,462	574	80	76	4	41	34	7	121	110	11	68,806	188.51

PROPORTIONAL NUMBERS.

		Mean strength.	Admitted.			Discharged on certificate of disability.			Died.			Total losses.			Constantly noneffective.	Days treated.	
			Total.	Disease.	Injury.	Total.	Disease.	Injury.	Total.	Disease.	Injury.	Total.	Disease.	Injury.		Each soldier.	Each case.
White troops	1910	68,548	955.08	772.28	182.81	14.09	12.60	1.50	4.33	2.35	1.98	18.42	14.95	3.48	36.25	13.23	13.85
	1909	71,025	1,067.57	869.26	198.31	16.82	15.16	1.66	4.80	2.91	1.89	21.62	18.07	3.55	41.51	15.15	14.19
Colored troops	1910	2,986	827.53	623.24	204.29	12.39	11.39	1.00	7.37	4.35	3.01	19.76	15.74	4.01	28.72	10.48	12.67
	1909	3,294	964.18	793.87	170.31	17.30	16.09	1.21	7.29	5.46	1.82	24.59	21.55	3.03	40.94	14.94	15.50
Porto Rican troops	1910	591	952.62	824.03	128.60	15.23	6.77	8.46	.....	.....	.....	15.23	6.77	8.46	31.98	11.43	12.20
	1909	567	1,188.71	1,088.18	100.53	10.58	8.82	1.76	12.35	7.05	5.29	22.93	15.87	7.05	43.03	15.71	13.21
Filipino troops	1910	5,093	876.10	747.89	128.22	6.79	6.04	.75	4.34	3.58	.75	11.13	9.62	1.50	26.01	9.49	10.83
	1909	5,369	937.98	831.07	106.91	14.44	13.72	.72	7.40	6.14	1.26	21.84	19.86	1.98	35.11	12.82	13.66

TABLE NO. 59.—*Admissions to sick report, discharges, and deaths, with ratios per 1,000 of mean strength, in which all available data for the period 1900–1909 are placed in comparison with the year 1910.*

Causes of admission to sick report.	American troops, Army 1900–1909.						American troops, Army 1910.					
Mean strength	S. G. O., 664,873 (mean annual, 66,487). A. G. O., 674,391 (mean annual, 67,439).						S. G. O., 71,534. A. G. O., 71,814.					
	Admissions.		Discharges.		Deaths.		Admissions.		Discharges.		Deaths.	
	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.
Typhoid fever	3,510	5.28	13	0.02	339	0.50	168	2.35	2	0.03	12	0.17
Malarial fevers, total	126,967	190.96	68	.10	217	.32	2,074	28.99	1	.01	3	.04
Intermittent	102,784	154.59	4	.01	3	.004	1,675	23.42				
Aestivo-autumnal	20,839	31.34	1	.001	184	.27	357	4.99			3	.04
Other malarial diseases	3,344	5.03	63	.09	30	.04	42	.59	1	.01		
Smallpox	420	.63			77	.11	15	.21			1	.01
Measles	6,323	9.51	8	.01	72	.11	355	4.96			1	.01
Eruptive fevers, others	1,146	1.72			4	.01	125	1.75				
Diphtheria	277	.42			12	.02	61	.85				
Influenza	18,582	27.95			7	.01	1,319	18.44				
Asiatic cholera	667	1.00			396	.59	3	.04			1	.01
Cholera nostras	716	1.08					3	.04				
Dysentery	23,391	35.18	447	.66	773	1.15	369	5.16	12	.17	5	.07
Yellow fever	188	.28			39	.06						
Leprosy	3	.01	2	.003	1	.001						
Beriberi	1,275	1.92	13	.02	60	.09						
Erysipelas	535	.80	1	.001	13	.02	52	.73			1	.01
Dengue	18,630	28.02			2	.003	1,040	14.54				
Mumps	7,514	11.30					261	3.65				
Cerebro spinal fever, including meningitis	180	.27	20	.03	96	.14	10	.14			7	.10
Purulent infection and septicemia	136	.20	5	.01	72	.11	6	.08			2	.03
Tuberculosis, all	3,174	4.77	1,668	2.47	471	.70	271	3.79	289	4.02	20	.28
Total venereal	118,148	177.70	2,122	3.15	33	.05	12,515	174.95	117	1.63	2	.03
Syphilis and its results	17,443	26.24	1,461	2.17	28	.04	2,117	29.59	67	.93	2	.03
Chancroid and its results	23,725	35.68	19	.03			2,292	32.04				
Gonorrhea and its results	76,980	115.78	642	.95	5	.01	8,106	113.32	50	.70		
Cancer and other malignant growths	137	.21	29	.04	48	.07	9	.13	2	.03	2	.03
Rheumatism, acute articular	5,032	7.57	20	.03	5	.01	503	7.03			1	.01
Rheumatism, subacute and chronic articular	4,259	6.41	334	.50	1	.001	317	4.43	14	.19		
Alcoholism and its results	17,353	26.10	142	.21	131	.19	1,712	23.93	8	.11	8	.11
Insanity	1,103	1.66	949	1.41	8	.01	114	1.59	74	1.03		
Diseases of the brain and spinal cord	973	1.46	318	.47	65	.10	17	.24	8	.11	2	.03
Tetanus	12	.02			9	.01						

Diseases of the heart	3,968	5.97	1,022	1.52	223	.33	281	3.93	52	.72	17	.24
Varicocele	2,740	4.12	59	.09	.....	.....	254	3.55	.....	.....	.....	.....
Adenitis, nonvenereal	4,402	6.62	8	.01	.....	.....	413	5.77	.....	.....	.....	.....
Lymphangitis	515	.77	6	.01	1	.001	37	.52	.....	.....	.....	.....
Coryza and other diseases of the nasal fossæ	10,042	15.10	67	.10	.....	.....	1,444	20.19	1	.01	.....	.....
Bronchitis, acute and chronic	32,662	49.13	59	.09	7	.01	2,163	30.24	1	.01	1	.01
Pneumonia, all	2,043	3.07	6	.01	286	.42	172	2.40	1	.01	26	.36
Pleurisy	2,195	3.30	76	.11	23	.03	159	2.22	1	.01	2	.03
Tonsillitis and other diseases of the pharynx	40,166	60.42	2	.003	3	.004	4,692	65.59	.....	.....	.....	.....
Gastritis	13,654	20.54	72	.11	15	.02	760	10.62	6	.08	.....	.....
Diarrhea and enteritis	87,914	132.23	145	.22	128	.19	2,680	37.46	1	.01	.....	.....
Peritonitis (simple)	91	.14	5	.01	45	.07	.....	.....	.....	.....	.....	.....
Inguinal and other hernia	3,069	4.62	543	.81	2	.003	248	3.47	17	.24	1	.01
Appendicitis	2,557	3.85	61	.09	88	.13	404	5.65	1	.01	11	.15
Diseases of the kidneys	1,715	2.58	173	.26	166	.25	109	1.52	10	.14	17	.24
Periostitis	671	1.01	28	.04	1	.001	69	.96	1	.01	.....	.....
Arthritis and synovitis	3,813	5.73	187	.28	1	.001	248	3.47	10	.14	.....	.....
All other diseases	257,402	387.16	4,542	6.74	358	.53	19,347	270.46	272	3.79	32	.45
Total for diseases	830,270	1,248.77	13,220	19.61	4,298	6.37	54,799	766.06	901	12.55	175	2.44
Total for injuries	143,585	215.96	1,741	2.58	2,071	3.07	13,141	183.70	106	1.48	145	2.02
Grand total	973,855	1,464.73	14,961	22.19	6,369	9.45	67,940	949.76	1,007	14.02	320	4.46

TABLE No. 60.—*Admissions to sick report, discharges, deaths, and noneffectiveness, with ratios per 1,000 of mean strength, for the Army—officers and total enlisted men—for the year 1910.*

Causes of admission to sick report.	Officers, United States Army.								American troops, Army.							
Mean strength	S. G. O., 4,216—A. G. O., 4,416.								S. G. O., 71,534—A. G. O., 71,814.							
	Admissions.		Retirement for disability.		Deaths.		Noneffective.		Admissions.		Discharges.		Deaths.		Noneffective.	
	Number.	Ratio.	Number.	Ratio	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.
Typhoid fever, including paratyphoid fever	17	4.03			1	0.23	3.94	0.93	168	2.35	2	0.03	12	0.17	34.37	0.48
Fevers, undetermined	5	1.19					.11	.03	278	3.89					5.76	.08
Malarial fevers	81	19.21					2.26	.54	2,074	28.99	1	.01	3	.04	50.27	.70
Intermittent	58	13.76					1.53	.36	1,675	23.42					34.22	.48
Aestivo-autumnal	18	4.27					.55	.13	357	4.99			3	.04	12.53	.18
Malarial cachexia	5	1.19					.18	.04	26	.36	1	.01			3.24	.05
Undetermined malarial infection									16	.22					.28	.004
Smallpox									15	.21			1	.01	1.36	.02
Measles	2	.47					.05	.01	355	4.96			1	.01	16.91	.24
Scarlet fever	1	.24					.18	.04	13	.18					1.33	.02
Diphtheria	1	.24					.02	.01	61	.85					3.70	.05
Influenza	215	51.00					3.04	.72	1,319	18.44					20.02	.28
Asiatic cholera									3	.04			1	.01	.13	.002
Cholera nostras	2	.47					.01	.003	3	.04					.03	.0004
Dysentery	14	3.32	1	0.23			1.24	.29	369	5.16	12	.17	5	.07	31.05	.43
Amebic	6	1.42	1	.23			.75	.18	238	3.33	12	.17	2	.03	24.94	.35
Bacillary	4	.95					.35	.08	55	.77			2	.03	2.68	.04
Mixed infections and other dysenteries	4	.95					.15	.03	76	1.06			1	.01	3.44	.05
Erysipelas	2	.47					.10	.02	52	.73			1	.01	2.99	.04
Dengue	48	11.39					.78	.18	1,040	14.54					19.38	.27
Mumps	2	.47					.07	.02	261	3.65					11.29	.16
Cerebro-spinal meningitis, epidemic									4	.06			3	.04	.21	.003
Yaws (frambesia)									3	.04					.69	.01
Vaccinia	2	.47					.01	.003	818	11.44					10.37	.14
Purulent infection and septicemia	2	.47					.02	.005	6	.08			2	.03	.36	.01
Tuberculosis (all)	26	6.17	6	1.36			13.04	3.09	271	3.79	289	4.02	20	.28	114.70	1.60
Tuberculosis, pulmonary	24	5.69	6	1.36			12.03	2.85	223	3.12	275	3.83	16	.22	101.71	1.42
Tuberculosis of other organs	2	.47					1.01	.24	48	.67	14	.19	4	.06	12.99	.18
Venereal diseases (all)	19	4.51					4.41	1.04	12,515	174.95	117	1.63	2	.03	823.15	11.51
Syphilis and its results	4	.95					2.21	.53	2,117	29.59	67	.93	2	.03	209.81	2.93
Chancroid and its results	5	1.19					.42	.10	2,292	32.64					128.41	1.80

Gonorrhea and its results	10	2.37					1.78	.42	8,106	113.32	50	.70			484.93	6.78
Cancer and other malignant growths	2	.47			2	.45	.76	.18	9	.13	2	.03	2	.03	1.94	.03
Tumors, nonmalignant	2	.47					.13	.03	141	1.97	1	.01	1	.01	4.88	.07
Rheumatism, articular (all)	20	4.74					1.45	.34	820	11.46	14	.19	1	.01	57.80	.81
Rheumatic fever	12	2.85					.56	.13	503	7.03			1	.01	26.61	.37
Rheumatism, subacute and chronic, articular	8	1.90					.89	.21	317	4.43	14	.19			31.19	.44
Alcoholism and its results	31	7.35					2.29	.54	1,712	23.93	8	.11	8	.11	23.51	.33
Insanity	3	.71	2	.45			.25	.06	114	1.59	74	1.03			21.43	.30
Epilepsy	1	.24					.61	.14	115	1.61	36	.50	1	.01	6.75	.09
Trachoma	4	.95					.11	.03	24	.34	5	.07			5.77	.08
Organic diseases of the heart	7	1.66	5	1.13	2	.45	1.93	.46	150	2.10	46	.64	17	.24	17.33	.24
Aneurism									8	.11	2	.03	4	.06	1.42	.02
Filariasis	2	.47					.01	.003								
Lymphangitis and elephantoid fever	2	.47					.01	.003								
Bilharziosis									1	.01					.01	.0002
Other parasitic diseases of the circulatory system									2	.03					.08	.001
Functional diseases of the heart	6	1.42					.40	.10	120	1.68	6	.08			6.62	.09
Bronchitis, acute and chronic	156	37.00					2.61	.62	2,163	30.24	1	.01	1	.01	42.79	.60
Broncho-pneumonia	2	.47					.79	.19	22	.31			1	.01	1.69	.02
Pneumonia (pneumonic fever)	1	.24			1	.23	.14	.03	150	2.10	1	.01	25	.35	12.23	.17
Diarrhea and enteritis	169	40.09					3.56	.84	2,680	37.46	1	.01			39.38	.55
Intestinal parasites	8	1.90					.09	.02	230	3.22					4.12	.06
Tenia saginata	6	1.42					.08	.02	48	.67					.77	.01
Tenia solium	1	.24					.01	.002	21	.29					.26	.004
Bothriocephalus latus									5	.07					.08	.001
Ascaris lumbricoides									31	.43					.60	.01
Oxyuris vermicularis									5	.07					.12	.002
Ankylostoma duodenale									12	.17					.45	.01
Necator Americanus	1	.24					.01	.001	104	1.45					1.72	.02
Trichocephalus trichuris									1	.01					.03	.0004
Other intestinal parasites									3	.04					.07	.001
Inguinal and other herniæ	16	3.80					3.19	.76	248	3.47	17	.24	1	.01	29.94	.42
Hepatic abscess									20	.28			4	.06	5.36	.07
Appendicitis	38	9.01			1	.23	3.91	.93	404	5.65	1	.01	11	.15	34.53	.48
Climatic bubo									7	.10					.52	.01
Tropical ulcer									25	.35					1.48	.02
Jiggers (pulex penetrans)									6	.08					.20	.003
Pemphigus contagiosus	2	.47					.13	.03	26	.36					1.39	.02
Dhobie itch	4	.95					.19	.05	186	2.60					4.68	.07
Tenia imbricata									5	.07					.29	.004
Prickly heat									16	.22					.18	.002
Acute nephritis	3	.71					.18	.04	16	.22			4	.06	1.73	.02
Chronic nephritis	9	2.13	8	1.81	2	.45	2.54	.60	45	.63	8	.11	12	.17	9.48	.13
Pyelitis and pyelonephritis							.04	.01	9	.13			1	.01	.91	.01
Malingering	1	.24					.02	.005	34	.48					1.29	.02

TABLE NO. 60.—*Admissions to sick report, discharges, deaths, and noneffectiveness, with ratios per 1,000 of mean strength, for the Army—officers and total enlisted men—for the year 1910*—Continued.

	Officers, United States Army.								American troops, Army.							
Mean strength	S. G. O., 4,216—A. G. O., 4,416.								S. G. O., 71,534—A. G. O., 71,814.							
Causes of admission to sick report.	Admissions.		Retirement for disability.		Deaths.		Noneffective.		Admissions.		Discharges.		Deaths.		Noneffective.	
	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.
External causes, special.																
Fractures, exclusive of gunshot	38	9.01			1	0.23	4.48	1.06	760	10.62	30	0.42	14	0.19	90.33	1.26
Dislocations	10	2.37					.41	.10	236	3.30	4	.06			10.06	.14
Sprains and muscular strains	119	28.23					4.47	1.06	3,691	51.60	4	.06			76.56	1.07
Wounds, gunshot	2	.47			2	.45	.15	.04	162	2.26	18	.25	53	.74	16.11	.23
Wounds other than gunshot	39	9.25					.87	.21	2,837	39.66	24	.33	1	.01	70.50	.99
Sunstroke									5	.07			1	.01	.07	.001
Frostbite and general freezing	1	.24					.09	.02	78	1.09	2	.03	1	.01	3.00	.04
Drowning					1	.23							30	.42		
Poisoning, acute	12	2.85					.11	.03	408	5.70			16	.22	4.84	.07
Venomous bites, etc	7	1.66					.22	.05	91	1.27					1.93	.03
Snake bite									3	.04					.03	.0004
Other venomous bites, etc	7	1.66					.22	.05	88	1.23					1.90	.03
Diseases and injuries grouped.																
General diseases	654	155.12	8	1.81	4	.91	37.06	8.79	26,984	377.22	468	6.52	70	.97	1,311.33	18.33
Infectious diseases	540	128.08	1	.23	1	.23	13.92	3.30	11,416	159.59	15	.21	27	.38	273.05	3.82
Other general diseases	114	27.04	7	1.59	3	.68	23.14	5.49	15,568	217.63	453	6.31	43	.60	1,038.27	14.51
Diseases of the nervous system and organs of special sense	199	47.20	12	2.72			15.83	3.75	2,388	33.38	190	2.65	9	.13	134.05	1.87
Of the nervous system	118	27.99	11	2.49			12.40	2.94	1,042	14.57	149	2.07	8	.11	74.02	1.03
Of the eye and its adnexa	58	13.76					2.16	.51	843	11.78	19	.26			35.03	.49
Of the ear and its adnexa	23	5.46	1	.23			1.27	.30	503	7.03	22	.31	1	.01	25.01	.35
Diseases of the circulatory system	63	14.94	6	1.36	2	.45	4.36	1.03	1,700	23.76	64	.89	22	.31	98.77	1.38
Diseases of the respiratory system	322	76.38			1	.23	8.26	1.96	4,322	60.42	14	.19	29	.40	97.18	1.36
Diseases of the digestive system	534	126.66	1	.23	2	.45	19.09	4.53	9,381	131.14	36	.50	26	.36	227.53	3.18
Diseases of the genito-urinary system	61	14.47	8	1.81	2	.45	5.99	1.42	998	13.95	32	.45	18	.25	48.27	.67
Diseases of the skin and cellular tissue	141	33.44					4.47	1.06	5,880	82.20	7	.10			150.19	2.10
Diseases of the organs of locomotion	98	23.24					4.46	1.06	2,080	29.08	31	.43			75.64	1.06
Malformations, etc	2	.47					.06	.01	118	1.65	56	.78			11.29	.16

Diseases, results of old age									3	.04	1	.01			.23	.003
Ill-defined diseases	49	11.62	1	.23			2.38	.57	945	13.21	2	.03	1	.01	28.51	.40
Total or disease	2,123	503.56	36	8.15	11	2.49	101.96	24.18	54,799	766.06	901	12.55	175	2.44	2,182.99	30.52
External causes	392	92.98	1	.23	4	.91	17.59	4.17	13,141	183.70	106	1.48	145	2.02	387.45	5.42
Total for disease and external causes	2,515	596.54	37	8.38	15	3.40	119.54	28.35	67,940	949.76	1,007	14.02	320	4.46	2,570.44	35.93

TABLE No. 61.—*Admissions to sick report, discharges, deaths, and noneffectiveness, with ratios per 1,000 of mean strength, for the United States Army, for the year 1910.*

Causes of admission to sick report.	Army, total.								Army, white.								Army, colored.							
Mean strength	S. G. O., 71,534—A. G. O., 71,814.								S. G. O., 68,548—A. G. O., 68,828.								S. G. O., 2,986—A. G. O., 2,986.							
	Admissions.		Discharges.		Deaths.		Noneffective.		Admissions.		Discharges.		Deaths.		Noneffective.		Admissions.		Discharges.		Deaths.		Noneffective.	
	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.
Typhoid fever, including paratyphoid fever	168	2.35	2	0.03	12	0.17	34.37	0.48	166	2.42	2	0.03	12	0.17	34.23	0.50	2	0.67					0.14	0.05
Fevers, undetermined	278	3.89					5.76	.08	273	3.98					5.72	.08	5	1.67					.05	.02
Malarial fevers	2,074	28.99	1	.01	3	.04	50.27	.70	2,060	30.05	1	.01	3	.04	49.99	.73	14	4.69					.28	.09
Intermittent	1,675	23.42					34.22	.48	1,664	24.28					34.02	.50	11	3.68					.19	.06
Æstivo-autumnal	357	4.99			3	.04	12.53	.18	354	5.16			3	.04	12.44	.18	3	1.00					.09	.03
Malarial cachexia	26	.36	1	.01			3.24	.05	26	.38	1	.01			3.24	.05								
Undetermined malarial infection	16	.22					.28	.004	16	.23					.28	.004								
Smallpox	15	.21			1	.01	1.36	.02	12	.18			1	.01	1.01	.01	3	1.00					.35	.12
Measles	355	4.96			1	.01	16.91	.24	353	5.15			1	.01	16.84	.25	2	.67					.08	.03
Scarlet fever	13	.18					1.33	.02	13	.19					1.33	.02								
Diphtheria	61	.85					3.70	.05	58	.85					33.92	.05	3	1.00					.30	.10
Influenza	1,319	18.44					20.02	.28	1,264	18.44					19.07	.28	55	18.42					.94	.32
Asiatic cholera	3	.04			1	.01	.13	.002	3	.04			1	.01	.13	.002								
Cholera nostras	3	.04					.03	.0004	3	.04					.03	.0004								
Dysentery	369	5.16	12	.17	5	.07	31.05	.43	364	5.31	12	.17	5	.07	30.32	.44	5	1.67					.73	.24
Amebic	238	3.33	12	.17	2	.03	24.94	.35	234	3.41	12	.17	2	.03	24.32	.35	4	1.34					.62	.21
Bacillary	55	.77			2	.03	2.68	.04	55	.80			2	.03	2.68	.04								
Mixed infections and other dysenteries	76	1.06			1	.01	3.44	.05	75	1.09			1	.01	3.33	.05	1	.33					.11	.04
Erysipelas	52	.73			1	.01	2.99	.04	51	.74			1	.01	2.97	.04	1	.33					.02	.01
Dengue	1,040	14.54					19.38	.27	1,040	15.17					19.38	.28								
Mumps	261	3.65					11.29	.16	255	3.72					11.06	.16	6	2.01					.23	.08
Cerebro-spinal meningitis, epidemic	4	.06			3	.04	.21	.003	4	.06			3	.04	.21	.003								
Yaws (frambesia)	3	.04					.69	.01							.26	.004	3	1.00					.43	.14
Vaccinia	818	11.44					10.37	.14	793	11.57					10.09	.15	25	8.37					.28	.09
Purulent infection and septicemia	6	.08			2	.03	.36	.01	6	.09			2	.03	.36	.01								
Tuberculosis, all	271	3.79	289	4.02	20	.28	114.70	1.60	265	3.87	278	4.04	19	.28	112.26	1.64	6	2.01	11	3.68	1	0.33	2.44	.82

Tuberculosis, pulmonary	223	3.12	275	3.83	16	.22	101.71	1.42	219	3.19	267	3.88	15	.22	100.02	1.46	4	1.34	8	2.68	1	.33	1.68	.56
Tuberculosis of other organs	48	.67	14	.19	4	.06	12.99	.18	46	.67	11	.16	4	.06	12.24	.18	2	.67	3	1.00			.75	.25
Venereal diseases, all	12,515	174.95	117	1.63	2	.03	823.15	11.51	12,007	175.16	113	1.64	2	.03	798.26	11.65	508	170.13	4	1.34			24.89	8.33
Syphilis and its results	2,117	29.59	67	.93	2	.03	209.81	2.93	2,039	29.75	65	.94	2	.03	203.64	2.97	78	26.12	2	.67			6.17	2.07
Chancroid and its results	2,292	32.04					128.41	1.80	2,182	31.83					122.85	1.79	110	36.84					5.56	1.86
Gonorrhea and its results	8,106	113.32	50	.70			484.93	6.78	7,786	113.58	48	.70			471.77	6.88	320	107.17	2	.67			13.16	4.41
Cancer and other malignant growths		.13	2	.03	2	.03	1.94	.03	9	.13	2	.03	2	.03	1.94	.03								
Tumors, nonmalignant	141	1.97	1	.01	1	.01	4.88	.07	136	1.98	1	.01	1	.01	4.72	.07	5	1.67					.16	.05
Rheumatism, articular, all	820	11.46	14	.19	1	.01	57.80	.81	765	11.16	14	.20	1	.01	53.59	.78	55	18.42					4.21	1.41
Rheumatic fever	503	7.03			1	.01	26.61	.37	471	6.87			1	.01	25.21	.37	32	10.72					1.40	.47
Rheumatism, subacute and chronic, articular	317	4.43	14	.19			31.19	.44	294	4.29	14	.20			28.38	.41	23	7.70					2.81	.94
Alcoholism and its results	1,712	23.93	8	.11	8	.11	23.51	.33	1,696	24.74	8	.12	8	.12	23.38	.34	16	5.36					.13	.04
Insanity	114	1.59	74	1.03			21.43	.30	107	1.56	68	.99			20.76	.30	7	2.34	6	2.01			.67	.22
Epilepsy	115	1.61	36	.50	1	.01	6.75	.09	111	1.62	35	.51	1	.01	6.38	.09	4	1.34	1	.33			.37	.12
Trachoma	24	.34	5	.07			5.77	.08	24	.35	5	.07			5.77	.08								
Organic diseases of the heart	150	2.10	46	.64	17	.24	17.33	.24	131	1.91	43	.62	12	.17	15.15	.22	19	6.36	3	1.00	5	1.67	2.17	.73
Aneurism	8	.11	2	.03	4	.06	1.42	.02	7	.10	2	.03	3	.04	1.18	.02	1	.33			1	.33	.24	.08
Bilharziosis	1	.01					.01	.0002	1	.01					.01	.0002								
Other parasitic diseases of the circulatory system	2	.03					.08	.001	2	.03					.08	.001								
Functional diseases of the heart	120	1.68	6	.08			6.62	.09	113	1.65	6	.09			6.48	.09	7	2.34					.14	.05
Bronchitis, acute and chronic	2,163	30.24	1	.01	1	.01	42.79	.60	2,083	30.39	1	.01	1	.01	41.20	.60	80	26.79					1.59	.53
Broncho-pneumonia	22	.31			1	.01	1.69	.02	21	.31			1	.01	1.61	.02	1	.33					.08	.03
Pneumonia (pneumonic fever)	150	2.10	1	.01	25	.35	12.23	.17	138	2.01	1	.01	23	.33	11.43	.17	12	4.02	2	.67			.80	.27
Diarrhea and enteritis	2,680	37.46	1	.01			39.38	.55	2,607	38.03	1	.01			38.49	.56	73	24.45					.89	.30
Intestinal parasites	230	3.22					4.12	.06	226	3.30					3.94	.06	4	1.34					.17	.06
Tenia, saginate	48	.67					.77	.01	47	.69					.76	.01	1	.33					.01	.003
Tenia solium	21	.29					.26	.004	21	.31					.26	.004								
Bothriocephalus latus	5	.07					.08	.001	5	.07					.09	.001								
Ascaris lumbricoides	31	.43					.60	.01	29	.42					.54	.01	2	.67					.06	.02
Oxyuris vermicularis	5	.07					.12	.002	5	.07					.12	.002								
Ankylostoma duodenale	12	.17					.45	.01	11	.16					.41	.01	1	.33					.04	.01
Necator Americanus	104	1.45					1.72	.02	104	1.52					1.65	.02							.07	.02
Trichocephalus	1	.01					.03	.0004	1	.01					.03	.0004								
Other intestinal parasites	3	.04					.07	.001	3	.04					.07	.001								
Inguinal and other herniæ	248	3.47	17	.24	1	.01	29.94	.42	241	3.53	17	.25	1	.01	28.72	.42	7	2.34					1.21	.41
Hepatic abscess	20	.28			4	.06	5.36	.07	18	.26			4	.06	4.74	.07	2	.67					.62	.21
Appendicitis	404	5.65	1	.01	11	.15	34.53	.48	392	5.72	1	.01	10	.15	33.37	.49	12	4.02	1	.33			1.16	.39
Climatic bubo	7	.10					.52	.01	7	.10					.52	.01								
Tropical ulcer	25	.35					1.48	.02	25	.36					1.48	.02								
Jiggers (pulex penetrans)	6	.08					.20	.003	6	.09					.20	.003								
Pemphigus contagiosus	26	.36					1.39	.02	26	.38					1.39	.02								
Dhobie itch	186	2.60					4.68	.07	183	2.67					4.55	.07	3	1.00					.13	.04
Tenia imbricata	5	.07					.29	.004	5	.07					.29	.004								
Prickly heat	16	.22					.18	.002	16	.23					.18	.003								
Acute nephritis	16	.22			4	.06	1.73	.02	14	.20			4	.06	1.44	.02	2	.67					.29	.10
Chronic nephritis	45	.63	8	.11	12	.17	9.48	.13	43	.63	8	.12	10	.15	9.44	.14	2	.67	2	.67			.03	.01
Pyelitis and pyelonephritis	9	.13			1	.01	.91	.01	8	.12					.90	.01	1	.33	1	.33			.01	.003
Malingering	34	.48					1.29	.02	27	.39					1.20	.02	7	2.34					.09	.03

TABLE No. 61.—*Admissions to sick report, discharges, deaths, and noneffectiveness, with ratios per 1,000 of mean strength, for the United States Army, for the year 1910*—Continued.

Causes of admission to sick report.	Army, total.								Army, white.								Army, colored.							
Mean strength	S. G. O., 71,534—A. G. O., 71,814.								S. G. O., 68,548—A. G. O., 68,828.								S. G. O., 2,986—A. G. O., 2,986.							
	Admissions.		Discharges.		Deaths.		Noneffective.		Admissions.		Discharges.		Deaths.		Noneffective.		Admissions.		Discharges.		Deaths.		Noneffective.	
	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.
External causes, special.																								
Fractures, exclusive of gunshot	760	10.62	30	0.42	14	0.19	90.33	1.26	739	10.78	30	0.44	14	0.20	88.24	1.29	21	7.03					2.09	0.70
Dislocations	236	3.30	4	.06			10.06	.14	219	3.19	4	.06			9.48	.14	17	5.69					.58	.19
Sprains and muscular strains	3,691	51.60	4	.06			76.56	1.07	3,494	50.97	3	.04			72.62	1.06	197	65.98	1	0.33			3.94	1.32
Wounds, gunshot	162	2.26	18	.25	53	.74	16.11	.23	153	2.23	17	.25	46	.67	15.24	.22	9	3.01	1	.33	7	2.34	.87	.29
Wounds other than gunshot	2,837	39.66	24	.33	1	.01	70.50	.99	2,708	39.51	24	.35	1	.01	67.65	.99	129	43.20					2.84	.95
Sunstroke	5	.07			1	.01	.07	.001	5	.07			1	.01	.07	.001								
Frostbite and general freezing	78	1.09	2	.03	1	.01	3.00	.04	66	.96	1	.01	1	.01	2.55	.04	12	4.02	1	.33			.45	.15
Drowning					30	.42							29	.42							1	.33		
Poisoning, acute	408	5.70			16	.22	4.84	.07	405	5.91			15	.21	4.81	.07	3	1.00			1	.33	.03	.01
Venomous bites, etc	91	1.27					1.93	.03	89	1.30					1.91	.03	2	.67					.02	.01
Snake bite	3	.04					.03	.0004	1	.01					.01	.0001	2	.67					.02	.01
Other venomous bites, etc	88	1.23					1.90	.03	88	1.28					1.90	.03								
Diseases and injuries grouped.																								
General diseases	26,984	377.22	468	6.52	70	.97	1,311.33	18.33	26,098	380.73	453	6.58	69	1.00	1,272.38	18.56	886	296.72	15	5.02	1	.33	38.95	13.05
Infectious diseases	11,416	159.59	15	.21	27	.38	273.05	3.82	11,124	162.28	15	.22	27	.39	266.38	3.89	292	97.79					6.67	2.23
Other general diseases	15,568	217.63	453	6.31	43	.60	1,038.27	14.51	14,974	218.45	438	6.36	42	.61	1,006.00	14.68	594	198.93	15	5.02	1	.33	32.28	10.81
Diseases of the nervous system and organs of special sense	2,388	33.38	190	2.65	9	.13	134.05	1.87	2,299	33.54	179	2.60	9	.13	129.88	1.89	89	29.80	11	3.68			4.18	1.40
Of the nervous system	1,042	14.57	149	2.07	8	.11	74.02	1.03	990	14.44	142	2.06	8	.12	71.96	1.05	52	17.41	7	2.34			2.06	.69
Of the eye and its adnexa	843	11.78	19	.26			35.03	.49	812	11.85	15	.22			33.11	.48	31	10.38	4	1.34			1.92	.64
Of the ear and its adnexa	503	7.03	22	.31	1	.01	25.01	.35	497	7.25	22	.32	1	.01	24.80	.36	6	2.01					.20	.07
Diseases of the circulatory system	1,700	23.76	64	.89	22	.31	98.77	1.38	1,625	23.71	60	.87	16	.23	93.83	1.37	75	25.12	4	1.34	6	2.01	4.95	1.66
Diseases of the respiratory system	4,322	60.42	14	.19	29	.40	97.18	1.36	4,086	59.61	14	.20	27	.39	92.61	1.35	236	79.04			2	.67	4.58	1.53
Diseases of the digestive system	9,381	131.14	36	.50	26	.36	227.53	3.18	9,113	132.94	36	.52	25	.36	220.48	3.22	268	89.75			1	.33	7.05	2.36

Diseases of the genito-urinary system	998	13.95	32	.45	18	.25	48.27	.67	954	13.92	30	.44	15	.22	46.50	.68	44	14.74	2	.67	3	1.00	1.77	.59
Diseases of the skin and cellular tissue	5,880	82.20	7	.10			150.19	2.10	5,746	83.82	7	.10			145.68	2.13	134	44.88					4.51	1.51
Diseases of the organs of locomotion	2,080	29.08	31	.43			75.64	1.06	1,979	28.87	30	.44			72.26	1.05	101	33.82	1	.33			3.38	1.13
Malformations, etc	118	1.65	56	.78			11.29	.16	117	1.71	55	.80			11.11	.16	1	.33	1	.33			.18	.06
Diseases, results of old age	3	.04	1	.01			.23	.003	3	.04	1	.01			.23	.003								
Ill-defined diseases	945	13.21	2	.03	1	.01	28.51	.40	918	13.39	2	.03	1	.01	27.88	.41	27	9.04					.62	.21
Total for disease	54,799	766.06	901	12.55	175	2.44	2,182.99	30.52	52,938	772.28	867	12.60	162	2.35	2,112.84	30.82	1,861	623.24	34	11.39	13	4.35	70.15	23.49
External causes	13,141	183.70	106	1.48	145	2.02	387.45	5.42	12,531	182.81	103	1.50	136	1.98	371.84	5.42	610	204.29	3	1.00	9	3.01	15.60	5.23
Total for disease and external causes	67,940	949.76	1,007	14.02	320	4.46	2,570.44	35.93	65,469	955.08	970	14.09	298	4.33	2,484.68	36.25	2,471	827.53	37	12.39	22	7.37	85.76	28.72
Suicide	31	.43																						

TABLE NO. 62.—*Admissions to sick report, discharges, deaths, and noneffectiveness, with ratios per 1,000 of mean strength, for the United States, continental (excluding Alaska), for the year 1910.*

Causes of admission to sick report.	United States, continental (excluding Alaska), total. Mean strength: S. G. O., 55,680—A. G. O., 55,680.										United States, continental (excluding Alaska), white. S. G. O., 52,694—A. G. O., 52,694.										United States, continental (excluding Alaska), colored. S. G. O., 2,986—A. G. O., 2,986.									
	Admissions.		Discharges.			Deaths.			Noneffective.		Admissions.		Discharges.			Deaths.			Noneffective.		Admissions.		Discharges.			Deaths.			Noneffective.	
	Number.	Ratio.	Number.[1]	Number.[2]	Ratio.[2]	Number.[1]	Number.[2]	Ratio.[2]	Number.	Ratio.	Number.	Ratio.	Number.[1]	Number.[2]	Ratio.[2]	Number.[1]	Number.[2]	Ratio.[2]	Number.	Ratio.	Number.	Ratio.	Number.[1]	Number.[2]	Ratio.[2]	Number.[1]	Number.[2]	Ratio.[2]	Number.	Ratio.
Typhoid fever, including paratyphoid fever	129	2.32	2	2	0.04	9	9	0.16	27.52	0.49	127	2.41	2	2	0.04	9	9	0.17	27.38	0.52	2	0.67						0.14	0.05
Fevers, undetermined	135	2.42							2.93	.05	130	2.47							2.88	.05	5	1.67						.05	.02
Malarial fevers	911	16.36	1	1	.02				19.91	.36	897	17.02	1						19.63	.37	14	4.69						.28	.09
Intermittent	811	14.57							15.49	.28	800	15.18							15.30	.29	11	3.68						.19	.06
Aestivo-autumnal	76	1.36							2.59	.05	73	1.39							2.50	.05	3	1.00						.09	.03
Malarial cachexia	13	.23	1						1.61	.03	13	.25	1						1.61	.03									
Undetermined malarial infection	11	.20							.22	.004	11	.21							.22	.004									
Smallpox	12	.22				1	1	.02	.99	.02	9	.17				1	1	.02	.64	.01	3	1.00						.35	.12
Measles	317	5.69				1	1	.02	14.56	.26	315	5.98				1	1	.02	14.49	.27	2	.67						.08	.03
Scarlet fever	13	.23							1.33	.02	13	.25							1.33	.03									
Diphtheria	60	1.08							3.64	.07	57	1.08							3.34	.06	3	1.00						.30	.10
Influenza	1,266	22.74							19.04	.34	1,211	22.98							18.10	.34	55	18.42						.91	.32
Cholera nostras	2	.04							.01	.0002	2	.04							.01	.0002									
Dysentery	110	1.98	12	10	.18	1	1	.02	13.44	.24	105	1.99	12	10	.19	1	1	.02	12.70	.24	5	1.67						.73	.24
Amebic	59	1.06	12	10	.18				11.35	.20	55	1.04	12	10	.19				10.73	.20	4	1.34						.62	.21
Bacillary	6	.11							.22	.004	6	.11							.22	.004									
Mixed infections and other dysenteries	45	.81				1	1	.02	1.87	.03	44	.84				1	1	.02	1.76	.03	1	.33						.11	.04
Erysipelas	47	.84				1	1	.02	2.89	.05	46	.87				1	1	.02	2.87	.05	1	.33						.02	.01
Dengue	21	.38							.48	.01	21	.40							.48	.01									
Mumps	244	4.38							10.65	.19	238	4.52							10.42	.20	6	2.01						.23	.08
Cerebrospinal meningitis, epidemic	4	.07				3	3	.05	.21	.004	4	.08				3	3	.06	.21	.004									
Yaws (frambesia)	3	.05							.69	.01									.26	.005	3	1.00						.43	.14
Vaccinia	809	14.53							10.19	.18	784	14.88							9.91	.19	25	8.37						.28	.09
Purulent infection and septicemia	3	.05				1	1	.02	.24	.004	3	.06				1	1	.02	.24	.004									
Tuberculosis (all)	196	3.52	289	223	4.01	17	14	.25	103.98	1.87	190	3.61	278	212	2	16	13	.25	101.54	1.93	6	2.01	11	11	3.68	1	1	0.33	2.44	.82
Tuberculosis, pulmonary	157	2.82	275	211	3.79	15	12	.22	92.07	1.65	153	2.90	267	203	3.85	14	11	.21	90.38	1.72	4	1.34	8	8	2.68	1	1	.33	1.68	.56

Tuberculosis of other organs	39	.70	14	12	.22	2	2	.04	11.91	.21	37	.70	11	9	.17	2	2	.04	11.16	.21	2	.67	3	3	1.00				.75	.25
Venereal diseases (all)	8,659	155.51	117	106	1.90	2	2	.04	564.70	10.14	8,151	154.69	113	102	1.94	2	2	.04	539.81	10.24	508	170.13	4	4	1.34				24.89	8.33
Syphilis and its results	1,484	26.65	67	63	1.13	2	2	.04	150.93	2.71	1,406	26.68	65	61	1.16	2	2	.04	144.76	2.75	78	26.12	2	2	.67				6.17	2.07
Chancroid and its results	1,471	26.42							85.32	1.53	1,361	25.83							79.76	1.51	110	36.84							5.56	1.86
Gonorrhea and its results	5,704	102.44	50	43	.77				328.44	5.90	5,384	102.17	48	41	.78				315.29	5.98	320	107.17	2	2	.67				13.16	4.41
Cancer and other malignant growths	8	.14	2	2	.04	2	2	.04	1.75	.03	8	.15	2	2	.04	2	2	.04	1.75	.03										
Tumors, nonmalignant	99	1.78	1	1	.02	1	1	.02	3.00	.05	94	1.78	1	1	.02	1	1	.02	2.84	.05	5	1.67							.16	.05
Rheumatism, articular (all)	698	12.54	14	12	.22	1	1	.02	50.39	.90	643	12.20	14	12	.23	1	1	.02	46.18	.88	55	18.42							4.21	1.41
Rheumatic fever	440	7.90				1	1	.02	24.00	.43	408	7.74				1	1	.02	22.60	.43	32	10.72							1.40	.47
Rheumatism, subacute and chronic, articular	258	4.63	14	12	.22				26.39	.47	235	4.46	14	12	.23				23.58	.45	23	7.70							2.81	.94
Alcoholism and its results	1,309	23.51	8	7	.13	5	5	.09	17.54	.31	1,293	24.54	8	7	.13	5	5	.09	17.41	.33	16	5.36							.13	.04
Insanity	88	1.58	74	62	1.11				17.88	.32	81	1.54	68	56	1.06				17.21	.33	7	2.34	6	6	2.01				.67	.22
Epilepsy	104	1.87	36	33	.59	1	1	.02	6.33	.11	100	1.90	35	32	.61	1	1	.02	5.96	.11	4	1.34	1	1	.33				.37	.12
Trachoma	15	.27	5	3	.05				3.03	.05	15	.28	5	3	.06				3.03	.06										
Organic diseases of the heart	132	2.37	46	38	.68	15	15	.27	15.33	.28	113	2.14	43	35	.66	10	10	.19	13.16	.25	19	6.36	3	3	1.00	5	5	1.67	2.17	.73
Aneurism	7	.13	2	2	.04	4	4	.07	1.26	.02	6	.11	2	2	.04	3	2	.04	1.01	.02	1	.33				1	1	.33	.24	.08
Bilharziosis	1	.02							.01	.0002	1	.02							.01	.0003										
Other parasitic diseases of the circulatory system	1	.02							.06	.001	1	.02							.06	.001										
Functional diseases of the heart	100	1.80	6	4	.07				5.76	.10	93	1.76	6	4	.08				5.62	.11	7	2.34							.14	.05
Bronchitis, acute and chronic	1,821	32.70	1	1	.02	1	1	.02	35.16	.63	1,741	33.04	1	1	.02	1	1	.02	33.58	.64	80	26.79							1.59	.53
Broncho-pneumonia	16	.29				1	1	.02	1.34	.02	15	.28				1	1	.02	1.25	.02	1	.33							.08	.03
Pneumonia (pneumonic fever)	129	2.32	1	1	.02	23	23	.41	10.62	.19	117	2.22	1	1	.02	21	21	.40	9.82	.19	12	4.02				2	2	.67	.80	.27
Diarrhea and enteritis	1,679	30.15	1	1	.02				20.73	.37	1,606	30.48	1	1	.02				19.84	.38	73	24.45							.89	.30
Intestinal parasites	166	2.98							2.76	.05	162	3.07							2.59	.05	4	1.34							.17	.06
Tenia, saginata	38	.68							.64	.01	37	.70							.63	.01	1	.33							.01	.003
Tenia solium	21	.38							.26	.005	21	.40							.26	.005										
Bothriocephalus latus	5	.09							.08	.001	5	.09							.08	.002										
Ascaris lumbricoides	12	.22							.24	.004	10	.19							.18	.003	2	.67							.06	.02
Oxyuris vermicularis	4	.07							.07	.001	4	.08							.07	.001										
Ankylostoma duodenale	8	.14							.26	.005	7	.13							.22	.004	1	.33							.04	.01
Necator Americanus	76	1.36							1.14	.02	76	1.44							1.07	.02									.07	.20
Trichocephalus trichuris	1	.02							.03	.0005	1	.02							.03	.0005										

[1] Including those occurring in the United States proper of cases from commands on duty in Alaska or insular possessions.
[2] Excluding those occurring in the United States proper of cases from commands on duty in Alaska or insular possessions.

TABLE NO. 62.—*Admissions to sick report, discharges, deaths, and noneffectiveness, with ratios per 1,000 of mean strength, for the United States, continental (excluding Alaska), for the year 1910*—Continued.

Causes of admission to sick report.	United States, continental (excluding Alaska), total.									United States, continental (excluding Alaska), white.									United States, continental (excluding Alaska), colored.								
Mean strength	S. G. O., 55,680—A. G. O., 55,680.									S. G. O., 52,694—A. G. O., 52,694.									S. G. O., 2,986—A. G. O., 2,986.								
	Admissions.		Discharges.			Deaths.			Noneffective.	Admissions.		Discharges.			Deaths.			Noneffective.	Admissions.		Discharges.			Deaths.			Noneffective.	
	Number.	Ratio.	Number.	Number.	Ratio.	Number.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Number.	Ratio.	Number.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Number.	Ratio.	Number.	Number.	Ratio.	Number.	Ratio.
Intestinal parasites—Continued.																													
Other intestinal parasites	1	0.02							0.04	0.001	1	0.02							0.04	0.001									
Inguinal and other hernia	206	3.70	17	17	0.31	1	1	0.02	24 37	.44	199	3.78	17	17	0.32	1	1	0.02	23.15	.44	7	2.34						1.21	0.41
Hepatic abscess	12	.22				2	1	.02	3.86	.07	10	.19				2	1	.02	3.25	.06	2	.67						.62	.21
Appendicitis	276	4.96	1	1	.02	7	7	.13	22.91	.41	264	5.01	1	1	.02	6	6	.11	21.76	.41	12	.402				1	1	0.33	1.16	.39
Climatic bubo	1	.02							.27	.005	1	.02							.27	.005									
Tropical ulcer	10	.18							.61	.01	10	.19							.61	.01									
Jiggers (pulex penetrans)	6	.11							.20	.004	6	.11							.20	.004									
Pemphigus contagiosus	8	.14							.42	.01	8	.15							.42	.01									
Dhobie itch	22	.40							.69	.01	19	.36							.56	.01	3	1.00						.13	.04
Tenia imbricata	2	.04							.17	.003	2	.04							.17	.003									
Prickly heat	4	.07							.03	.001	4	.08							.03	.001									
Acute nephritis	13	.23				4	4	.07	1.42	.30	11	.21				4	4	.08	1.13	.02	2	.67						.29	.10
Chronic nephritis	35	.63	8	8	.14	12	10	.18	7.99	.14	33	.63	8	8	.15	10	8	.15	7.96	.15	2	.67				2	2	.67	.03	.01
Pyelitis and pyelonephritis	6	.11				1	1	.02	.64	.01	5	.09							.63	.01	1	.33				1	1	.33	.01	003
Malingering	29	.52							.98	.02	22	.42							.89	.02	7	2.34						.09	.03
External causes, special.																													
Fractures, exclusive of gunshot	626	11.24	30	26	.47	10	10	.18	73.65	1.32	605	11.48	30	26	.49	10	10	.19	71.56	1.36	21	7.03						2.09	.70
Dislocations	199	3.57	4	4	.07				8.54	.15	182	3.45	4	4	.08				7.96	.15	17	5.69						.58	.19
Sprains and muscular strains	3,016	54.17	4	4	.07				62.57	1.12	2,819	53.50	3	3	.06				58.63	1.11	197	65.98	1	1	0.33			3.94	1.32
Wounds, gunshot	127	2.28	18	12	.22	44	44	.79	12.62	.23	118	2.24	17	11	.21	37	37	.70	11.75	.22	9	3.01	1	1	.33	7	7	2.34	.87	.29
Wounds other than gunshot	2,213	39.74	24	18	.32				54.82	.98	2,084	39.55	24	18	.34				51.98	.99	129	43.20						2.84	.95
Sunstroke	4	.07				1	1	.02	.05	.001	4	.08				1	1	.02	.05	.001									

Frostbite and general freezing	65	1.17	2	1	.02	1	1	.02	2.33	.04	53	1.01	1			1	1	.02	1.88	.04	12	4.02	1	1	.33				.45	.15
Drowning						24	24	.43								23	23	.44								1	1	.33		
Poisoning, acute	141	2.53				15	15	.27	1.37	.02	138	2.62				14	14	.27	1.34	.03	3	1.00				1	1	.33	.03	.01
Venomous bites, etc	58	1.04							1.02	.02	56	1.06							1.00	.02	2	.67							.02	.01
Snake bite	3	.05							.03	.0005	1	.02							.01	.0001	2	.67							.02	.01
Other venomous bites, etc	55	.99							1.00	.02	55	1.04							1.00	.02										
Diseases and injuries grouped.																														
General diseases	19,365	347.79	468	383	6.88	50	46	.83	939.24	16.87	18,479	350.69	453	368	6.98	49	45	.85	900.28	17.09	886	296.72	15	15	5.02	1	1	.33	38.95	13.05
Infectious diseases	8,320	149.42	15	12	.22	16	16	.29	187.42	3.37	8,028	152.38	15	12	.23	16	16	.30	180.75	3.43	292	97.79							6.67	2.23
Other general diseases	11,045	198.37	453	371	6.66	34	30	.54	751.82	13.50	10,451	198.33	438	356	6.76	33	29	.55	719.54	13.66	594	198.93	15	15	5.02	1	1	.33	32.28	10.81
Diseases of the nervous system and organs of special sense	1,772	31.82	190	159	2.86	4	4	.07	102.42	1.84	1,683	31.94	179	148	2.81	4	4	.08	98.24	1.86	89	29.80	11	11	3.68				4.18	1.40
Of the nervous system	778	13.97	149	128	2.30	4	4	.07	58.63	1.05	726	13.78	142	121	2.30	4	4	.08	56.57	1.07	52	17.41	7	7	2.34				2.06	.69
Of the eye and its adnexa	642	11.53	19	15	.27				26.04	.47	611	11.60	15	11	.21				24.13	.46	31	10.38	4	4	1.34				1.92	.64
Of the ear and its adnexa	352	6.32	22	16	.29				17.75	.32	346	6.57	22	16	.30				17.55	.33	6	2.01							.20	.07
Diseases of the circulatory system	1,189	21.35	63	53	.95	19	19	.34	71.71	1.29	1,114	21.14	59	49	.93	13	13	.25	66.76	1.27	75	25.12	4	4	1.34	6	6	2.01	4.95	1.66
Diseases of the respiratory system	3,624	65.09	14	12	.22	27	27	.48	79.44	1.43	3,388	64.30	14	12	.23	25	25	.47	74.86	1.42	236	79.04				2	2	.67	4.58	1.53
Diseases of the digestive system	6,538	117.42	36	35	.63	17	15	.27	155.88	2.80	6,270	118.99	36	35	.66	16	14	.27	148.83	2.82	268	89.75				1	1	.33	7.05	2.36
Diseases of the genito-urinary system	779	13.99	32	32	.57	18	17	.31	38.31	.69	735	13.95	30	30	.57	15	14	.27	36.55	.69	44	14.74	2	2	.67	3	3	1.00	1.77	.59
Diseases of the skin and cellular tissue	4,129	74.15	7	7	.13				104.68	1.88	3,995	75.82	7	7	.13				100.18	1.90	134	44.88							4.51	1.51
Diseases of the organs of locomotion	1,650	29.63	31	28	.50				60.45	1.09	1,549	29.40	30	27	.51				57.07	1.08	101	33.82	1	1	.33				3.38	1.13
Malformations, etc	96	1.72	56	51	.92				9.61	.17	95	1.80	55	50	.95				9.43	.18	1	.33	1	1	.33				.18	.06
Diseases, results of old age	2	.04	1	1	.02				.21	.004	2	.04	1	1	.02				.21	.004										
Ill-defined diseases	697	12.52	2	2	.04				21.61	.39	670	12.71	2	2	.04				20.99	.40	27	9.04							.62	.21
Total for disease	39,841	715.54	900	763	13.70	135	128	2.30	1583.55	28.44	37,980	720.77	866	729	13.83	122	115	2.18	1513.40	28.72	1,861	623.24	34	34	11.39	13	13	4.35	70.15	23.49
External causes	10,229	183.71	106	88	1.58	118	118	2.12	306.96	5.51	9,619	182.54	103	85	1.61	109	109	2.07	291.36	5.53	610	204.29	3	3	1.00	9	9	3.01	15.60	5.23
Total for disease and external causes	50,070	899.25	1,006	851	15.28	253	246	4.42	1890.51	33.95	47,599	903.31	969	814	15.45	231	224	4.25	1804.75	34.25	2,471	827.53	37	37	12.39	22	22	7.37	85.76	28.72

TABLE NO. 63.—*Admissions to sick report, discharges, deaths, and noneffectiveness, with ratios per 1,000 of mean strength, for Alaska, Hawaii, and American troops serving in the Philippine Islands for the year 1910.*

	Alaska.									Hawaii.									Philippine Islands.								
Mean strength	S. G. O., 1,081—A. G. O., 1,131.									S. G. O., 1,220—A. G. O., 1,225.									S. G. O., 12,277—A. G. O., 12,333.								
Causes of admission to sick report.	Admissions.		Discharges.			Deaths.			Noneffective.	Admissions.		Discharges.			Deaths.			Noneffective.	Admissions.		Discharges.			Deaths.			Noneffective.	
	Number.	Ratio.	Number.[1]	Number.[2]	Ratio.	Number.[1]	Number.[2]	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.[1]	Number.[2]	Ratio.	Number.[1]	Number.[2]	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.[1]	Number.[2]	Ratio.[2]	Number.[1]	Number.[2]	Ratio.[2]	Number.	Ratio.
Typhoid fever, including paratyphoid fever										2	1.64								31	2.53				2	2	0.16	5.89	0.48
Fevers, undetermined										1	.82								132	10.75							2.61	.21
Malarial fevers	9	8.33							0.18	0.16	1	.82							1,060	86.34		1	0.08	2	2	.16	28.50	2.32
Intermittent	9	8.33							.18	.16	1	.82							763	62.15							17.30	1.41
Aestivo-autumnal																			279	22.73				2	2	.16	9.79	.80
Malarial cachexia																			13	1.06		1	.08				1.35	.11
Undetermined malarial infection																			5	.41							.06	.005
Smallpox																			2	.16							.33	.03
Measles										1	.82							.05	.04	26	2.12						2.07	.17
Diphtheria																			1	.08							.05	.004
Influenza	1	.93							.04	.04									15	1.22							.33	.03
Asiatic cholera																			3	.24				1	1	.08	.13	.01
Cholera nostras										1	.82							.02	.01									
Dysentery										2	1.64							.05	.04	238	19.39		2	.16	4	4	.32	15.52	1.26
Amœbic																			164	13.36		2	.16	2	2	.16	11.85	.97
Bacillary																			46	3.75				2	2	.16	2.29	.19
Mixed infections and other dysenteries										2	1.64							.05	.04	28	2.28							1.38	.11
Erysipelas	1	.93							.03	.03									3	.24							.05	.004
Dengue																			1,017	82.84							18.79	1.53
Mumps	7	6.48							.34	.32									5	.41							.19	.02
Vaccinia											5	4.10						.12	.10	3	.24							.03	.003
Purulent infection and septicemia																			3	.24				1	1	.08	.12	.01
Tuberculosis (all)	2	1.85		4	3.54				.07	.06	5	4.10		5	4.08			.17	.14	67	5.46		56	4.54		5	.41	5.06	.41
Tuberculosis, pulmonary	2	1.85		4	3.54				.07	.06	4	3.28		4	3.27			.13	.11	59	4.81		55	4.46		3	.24	4.29	.35
Tuberculosis of other organs											1	.82		1	.82			.04	.03	8	.65		1	.08	2	2	.16	.77	.06
Venereal diseases (all)	50	46.25		2	1.77				3.89	3.60	194	159.02		1	.82			26.71	21.89	3,384	275.64		8	.65				217.50	17.72
Syphilis and its results	9	8.33		1	.88				1.41	1.31	42	34.43		1	.82			4.88	4.00	549	44.72		2	.16				49.73	4.05
Chancroid and its results	9	8.33							.31	.28	18	14.75						1.42	1.16	747	60.85							39.32	3.20

Gonorrhea and its results	32	29.60		1	.88				2.17	2.01	134	109.84							20.41	16.73	2,088	170.07		6	.49				128.45	10.46
Cancer and other malignant growths																					1	.08							.14	.01
Tumors, nonmalignant	2	1.85							.02	.02	3	2.46							.29	.24	37	3.01							1.48	.12
Rheumatism, articular (all)	5	4.63							.47	.44	9	7.38		1	.82				.59	.49	100	8.15		1	.08				5.94	.48
Rheumatic fever	3	2.78							.34	.31	3	2.46		1	.82				.18	.15	53	4.32							2.04	.17
Rheumatism, subacute and chronic, articular	2	1.85							.13	.12	6	4.92							.41	.33	47	3.83		1	.08				3.90	.32
Alcoholism and its results	32	29.60							.33	.31	14	11.48							.10	.09	347	28.26		1	.08	3	3	.24	5.29	.43
Insanity											1	.82		3	2.45				.08	.07	23	1.87		9	.73				2.20	.18
Epilepsy																					9	.73		3	.24				.30	.02
Trachoma	3	2.78							2.17	2.01	1	.82		1	.82				.03	.03	5	.41		1	.08				.35	.03
Organic diseases of the heart											3	2.46		1	.82				.32	.26	14	1.14		7	.57	2	2	.16	1.10	.09
Aneurism											1	.82							.14	.12										
Other parasitic diseases of the circulatory system																					1	.08							.02	.002
Functional diseases of the heart											1	.82		1	.82				.04	.03	17	1.38		1	.08				.61	.05
Bronchitis, acute and chronic	17	15.73							.24	.22	35	28.69							.60	.49	265	21.59							5.85	.48
Broncho-pneumonia	2	1.85							.09	.09											3	.24							.26	.02
Pneumonia (pneumonic fever)	2	1.85							.08	.08	2	1.64							.27	.22	9	.73				1	1	.08	.84	.07
Diarrhea and enteritis	8	7.40							.13	.12	20	16.39							.33	.27	919	74.86							16.94	1.38
Intestinal parasites	1	.93							.01	.01	1	.82							.01	.01	61	4.97							1.32	.11
Tenia saginata	1	.93							.01	.01	1	.82							.01	.01	8	.65							.11	.01
Ascaris lumbricoides																					19	1.55							.36	.03
Oxyuris vermicularis																					1	.08							.05	.004
Ankylostoma duodenale																					4	.33							.19	.02
Necator americanus																					27	2.20							.58	.05
Other intestinal parasites																					2	.16							.03	.002
Inguinal and other hernia	3	2.78							.37	.34	3	2.46							.61	.50	33	2.69							4.48	.37
Hepatic abscess	1	.93							.22	.20											7	.57				2	3	.24	1.19	.10
Appendicitis	7	6.48				1	1	.88	.56	.51	13	10.66				1	1	0.82	1.36	1.11	98	7.98				2	2	.16	9.23	.75
Climatic bubo																					6	.49							.24	.02
Tropical ulcer											2	1.64							.33	.27	13	1.06							.45	.04
Pemphigus contagiosus																					18	1.47							.89	.07
Dhobie itch											6	4.92							.16	.13	154	12.54							3.79	.31
Tenia imbricata																					3	.24							.12	.01
Prickly heat											2	1.64							.03	.02	9	.73							.10	.01
Acute nephritis																					3	.24							.31	.02
Chronic nephritis	1	.93							.02	.02	2	1.64							.23	.19	6	.49				1	1	.08	.85	.07
Pyelitis and pyelonephritis																	1	.82			3	.24							.27	.02
Malingering											2	1.64							.08	.07	3	.24							.23	.02
External causes, special.																														
Fractures, exclusive of gunshot	13	12.03							1.45	1.34	16	13.11				1	1	.82	1.76	1.44	100	8.15		4	.32	3	3	.24	12.74	1.04
Dislocations	4	3.70							.15	.13	4	3.28							.39	.32	29	2.36							.98	.08
Sprains and muscular strains	52	48.11							.92	.85	95	77.87							1.90	1.55	520	42.36							10.82	.88
Wounds, gunshot	5	4.63		1	.88				.78	.72	3	2.46							.13	.11	27	2.20		5	.41	9	9	.73	2.35	.19

[1] Number of discharges and deaths which actually occurred.
[2] Number of discharges and deaths, including those of cases invalided home and deducted from the United States and transports.

TABLE No. 63.—*Admissions to sick report, discharges, deaths, and noneffectiveness, with ratios per 1,000 of mean strength, for Alaska, Hawaii, and American troops serving in the Philippine Islands for the year 1910*—Continued.

	Alaska.									Hawaii.									Philippine Islands.								
Mean strength	S. G. O., 1,081—A. G. O., 1,131.									S. G. O., 1,220—A. G. O., 1,225.									S. G. O., 12,277—A. G. O., 12,333.								
Causes of admission to sick report.	Admissions.		Discharges.			Deaths.			Noneffective.	Admissions.		Discharges.			Deaths.			Noneffective.	Admissions.		Discharges.			Deaths.			Noneffective.	
	Number.	Ratio.	Number.	Number.	Ratio.	Number.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Number.	Ratio.	Number.	Number.	Ratio.	Number.	Ratio.	Number.	Number.	Ratio.	Number.	Number.	Ratio.	Number.	Ratio.
External causes, special—Contd.																											
Wounds other than gunshot	24	22.20							0.53	0.49	78	63.94							2.63	2.16	515	41.95		6	0.49	1	1	0.08	12.02	0.98
Sunstroke																					1	.08							.02	.002
Frostbite and general freezing	13	12.03		1	0.88				.67	.62																				
Drowning																										6	6	.49		
Poisoning, acute	1	.93							.02	.02	19	15.57							.15	.13	246	20.04				1	1	.08	3.28	.27
Venomous bites, etc											2	1.64							.01	.01	31	2.52							.90	.07
Diseases and injuries grouped.																														
General diseases	139	128.58		6	5.31		1	0.88	5.72	5.29	307	251.64		9	7.35				29.50	24.18	6,687	544.68		69	5.59	17	20	1.62	313.39	25.53
Infectious diseases	47	43.48							.89	.82	74	60.66							1.24	1.02	2,737	222.94		3	.24	9	9	.73	76.91	6.26
Other general diseases	92	85.11		6	5.31		1	.88	4.82	4.46	233	190.98		9	7.35				28.26	23.16	3,950	321.74		66	5.35	8	11	.89	236.48	19.26
Diseases of the nervous system and organs of special sense	20	18.50							2.62	2.42	52	42.62		6	4.90				2.70	2.21	486	39.59		25	2.03	5	5	.41	21.38	1.74
Of the nervous system	4	3.70							.16	.14	13	10.66		3	2.45				.97	.79	203	16.53		18	1.46	4	4	.32	10.81	.88
Of the eye and its adnexa	11	10.18							2.35	2.17	25	20.49		3	2.45				1.13	.93	162	13.20		1	.08				5.19	.42
Of the ear and its adnexa	5	4.63							.12	.11	14	11.48							.60	.49	121	9.86		6	.49	1	1	.08	5.39	.44
Diseases of the circulatory system	14	12.95				1	1	.88	.45	.42	32	26.23		2	1.63				2.53	2.08	448	36.49	1	10	.81	2	2	.16	22.55	1.84
Diseases of the respiratory system	36	33.30							.65	.60	71	58.20							1.51	1.24	547	44.55		1	.08	1	1	.08	13.24	1.08
Diseases of the digestive system	71	65.68				1	1	.88	2.25	2.08	170	139.34		1	.82	1	1	0.82	5.61	4.60	2,452	199.72				7	8	.65	59.93	4.88
Diseases of the genito-urinary system	5	4.63							.08	.08	16	13.11					1	.82	1.09	.90	192	15.64					1	.08	8.26	.67
Diseases of the skin and cellular tissue	34	31.45							1.01	.93	171	140.16							5.21	4.27	1,485	120.96							37.70	3.07
Diseases of the organs of locomotion	23	21.28		1	.88				.39	.36	51	41.80		1	.82				2.33	1.91	341	27.78		1	.08				11.79	.96
Malformations, etc											4	3.28		2	1.63				.27	.22	18	1.47		3	.24				1.22	.10

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TABLE No. 64.—*Admissions to sick report, discharges, deaths, and noneffectiveness, with ratios per 1,000 of mean strength, for American troops on transports, Porto Rican native troops, and Filipino troops, for the year 1910.*

Causes of admissions to sick report.	Transports.								Porto Rican native troops.								Philippine Scouts.							
Mean strength	S. G. O., 1,253—A. G. O., 1,422.								S. G. O., 591—A. G. O., 591.								S. G. O., 5,093—A. G. O., 5,302.							
	Admissions.		Discharges.		Deaths.		Noneffective.		Admissions.		Discharges.			Deaths.		Noneffective.			Discharges.		Deaths.		Noneffective.	
	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.[1]	Number.[2]	Ratio.[2]	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.
Typhoid fever, including paratyphoid fever	8	6.38			1	0.70	0.96	0.77	3	5.08						0.31	0.53	13	2.55	1	0.19	1	0.19	1.85	0.36
Fevers, undetermined	9	7.18					.20	.16										34	6.68					.53	.10
Malarial fevers	93	74.22			1	.70	1.65	1.32	44	74.45						.72	1.22	1,240	243.47			3	.57	24.99	4.91
Intermittent	91	72.63					1.23	.98	34	57.53						.49	.83	1,110	217.95			2	.38	19.74	3.88
Aestivo-Autumnal	2	1.60			1	.70	.15	.12	10	16.92						.23	.38	121	23.76			1	.19	4.97	.98
Malarial cachexia							.27	.22										4	.79					.08	.02
Undetermined malarial infection																		5	.98					.20	.04
Smallpox	1	.80					.03	.03	1	1.69						.05	.08	1	.20					.07	.01
Measles	11	8.78					.23	.18	1	1.69						.07	.12	2	.39					.07	.01
Influenza	37	29.53					.60	.48	14	23.69						.22	.37	15	2.95					.20	.04
Asiatic cholera																		1	.20					.05	.01
Dysentery	19	15.16					2.05	1.63	13	22.00						.52	.88	51	10.01					2.39	.47
Amebic	15	11.97					1.74	1.39	13	22.00						.52	.88	31	6.09					1.58	.31
Bacillary	3	2.39					.17	.14								.003	.005	11	2.16					.38	.08
Mixed infections and other dysenteries	1	.80					.14	.11										9	1.77					.42	.08
Beriberi																		56	11.00	2	.38	2	.38	8.44	1.66
Erysipelas	1	.80					.02	.01										3	.59					.10	.02
Dengue	2	1.60					.11	.09										92	18.06					1.92	.38
Mumps	5	3.99					.11	.09										11	2.16					.32	.06
Yaws (frambesia)																		1	.20					.09	.02
Vaccinia	1	.80					.02	.01	1	1.69						.01	.01	6	1.18					.10	.02
Purulent infection and septicemia																		1	.20					.35	.07
Tuberculosis (all)	1	.80			1	.70	5.42	4.32	1	1.69		1	1.69			.02	.04	17	3.34	15	2.83	5	.94	4.76	.93
Tuberculosis, pulmonary	1	.80			1	.70	5.15	4.11				1	1.69					15	2.95	14	2.64	4	.75	4.52	.89
Tuberculosis of other organs							.27	.22	1	1.69						.02	.04	2	.39	1	.19	1	.19	.24	.05
Venereal diseases (all)	225	179.57					10.11	8.07	96	162.44						5.30	8.97	316	62.05					19.90	3.91
Syphilis and its results	33	26.34					2.85	2.27	19	32.15						1.24	2.09	22	4.32					3.15	.62
Chancroid and its results	46	36.71					1.93	1.54	33	55.84						1.96	3.31	29	5.69					1.87	.37
Gonorrhea and its results	146	116.52					5.34	4.26	44	74.45						2.11	3.57	265	52.03					14.88	2.92
Cancer and other malignant growths							.05	.04																	

Tumors, nonmalignant							.08	.07	2	3.38					.05	.08	10	1.96				.32	.06
Rheumatism, articular (all)	7	5.59					.40	.32	1	1.69					.01	.01	21	4.12				.69	.14
Rheumatic fever	3	2.39					.04	.03	1	1.69					.01	.01	13	2.55				.34	.07
Rheumatism, subacute and chronic, articular	4	3.19					.36	.28									8	1.57				.35	.07
Alcoholism and its results	10	7.98					.24	.19	2	3.38	1	1	1.69		.01	.01	2	.39				.02	.003
Insanity	2	1.60					1.27	1.01	2	3.38	1	1	1.69		.62	1.05	3	.59	1	.19		.42	.08
Epilepsy	2	1.60					.12	.10									3	.59	1	.19		.31	.06
Trachoma							.18	.15											1	.19		.27	.05
Organic diseases of the heart	1	.80					.58	.46	1	1.69	1	1	1.69		.20	.33	1	.20	1	.19		.36	.07
Aneurism							.02	.02									1	.20	1	.19		.30	.06
Filariasis									17	28.76					.49	.83							
Lymphatic varix									2	3.38					.02	.03							
Lymphangitis and elephantoid fever									7	11.84					.16	.27							
Other filariasis									8	13.54					.31	.52							
Functional diseases of the heart	2	1.60					.20	.16	1	1.69					.01	.02							
Bronchitis, acute and chronic	25	19.95					.94	.75	12	20.30					.18	.30	185	36.33	1	.19		4.46	.88
Broncho-pneumonia	1	.80					.002	.002									3	.59				.21	.04
Pneumonia (pneumonic fever)	8	6.38			1	.70	.42	.33	2	3.38					.13	.22	3	.59			1 .19	.53	.10
Diarrhea and enteritis	54	43.10					1.25	1.00	12	20.30					.10	.17	152	29.84				2.02	.40
Intestinal parasites									46	77.83					1.21	2.04	92	18.06				2.32	.46
Tenia solium																	2	.39				.02	.003
Hymenolepsis nana																	1	.20				.02	.004
Ascaris lumbricoides																	14	2.75				.35	.07
Ankylostoma duodenale																	36	7.07				.76	.15
Necator americanus									45	76.14					1.16	1.97	36	7.07				1.02	.20
Trichocephalus trichuris									1	1.69					.04	.07	2	.39				.04	.01
Other intestinal parasites																	1	.20				.13	.02
Inguinal and other hernia	3	2.39					.11	.09	3	5.08					.20	.34	1	.20				.22	.04
Hepatic abscess							.08	.07									1	.20			1 .19	.01	.002
Appendicitis	10	7.98					.47	.37									12	2.36			1 .19	1.01	.20
Climatic bubo																	1	.20				.06	.01
Tropical ulcer							.08	.07									11	2.16				.42	.06
Jiggers (pulex penetrans)									2	3.38					.04	.06							
Pemphigus contagiosus							.08	.07	1	1.69					.01	.01	2	.39				.17	.03
Dhobie itch	4	3.19					.05	.04	5	8.46					.07	.12	114	22.38				3.05	.60
Prickly heat	1	.80					.01	.01	2	3.38					.01	.02	1	.20				.02	.004
Acute nephritis																	2	.39				.11	.02
Chronic nephritis	1	.80					.38	.30									3	.59	4	.75	1 .19	1.23	.24
Malingering																	1	.20				.01	.001
External causes, special.																							
Fractures, exclusive of gunshot	5	3.99					.73	.59	2	3.38	3	3	5.08		1.08	1.83	15	2.95	2	.38		1.45	.28
Dislocations									2	3.38					.31	.52	6	1.18				.15	.03
Sprains and muscular strains	8	6.38					.35	.28	14	23.69					.29	.49	103	20.22				1.97	.39
Wounds, gunshot							.23	.18	2	3.38	1	1	1.69		.44	.74	7	1.37	1	.19		1.01	.20
Wounds other than gunshot	7	5.59					.49	.39	31	52.45	1	1	1.69		.67	1.13	218	42.80	1	.19	2 .38	5.49	1.09
Sunstroke																	3	.59			1 .19	.22	.04
Poisoning, acute	1	.80					.02	.02									4	.79				.04	.01
Venomous bites, etc									2	3.38					.05	.08	21	4.12				.38	.07

[1] Number of discharges which actually occurred.

[2] Number of discharges including those of cases invalided home and deducted from the United States.

TABLE NO. 64.—*Admissions to sick report, discharges, deaths, and noneffectiveness, with ratios per 1,000 of mean strength, for American troops on transports, Porto Rican native troops, and Filipino troops, for the year 1910*—Continued.

Causes of admissions to sick report.	Transports.								Porto Rican native troops.								Philippine Scouts.							
Mean strength	S. G. O., 1,253—A. G. O., 1,422.								S. G. O., 591—A. G. O., 591.								S. G. O., 5,093—A. G. O., 5,302.							
	Admissions.		Discharges.		Deaths.		Noneffective.		Admissions.		Discharges.		Deaths.		Noneffective.		Admissions.		Discharges.		Deaths.		Noneffective.	
	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.
Diseases and injuries grouped.																								
General diseases	482	384.68			3	2.11	23.24	18.55	192	324.87	1	2	3.38			7.39	12.50	1,902	373.45	18	3.39	11	2.07	67.55	13.26
Infectious diseases	238	189.94			2	1.41	6.59	5.26	90	152.28						2.00	3.38	1,532	300.81	3	.57	6	1.13	41.41	8.13
Other general diseases	244	194.73			1	.70	16.65	13.29	102	172.59	1	2	3.38			5.39	9.12	370	72.65	15	2.83	5	.94	26.14	5.13
Diseases of the nervous system and organs of special sense	56	44.69					4.82	3.85	26	43.99	1	1	1.69			1.23	2.08	173	33.97	5	.94	1	.19	5.88	1.15
Of the nervous system	42	33.52					3.35	2.67	11	18.61	1	1	1.69			.81	1.38	27	5.30	3	.57			1.48	.29
Of the eye and its adnexa	3	2.39					.32	.25	11	18.61						.24	.40	128	25.13	2	.38			3.73	.73
Of the ear and its adnexa	11	8.78					1.16	.92	4	6.77						18	.31	18	3.53			1	.19	.67	.13
Diseases of the circulatory system	17	13.57					1.53	1.22	34	57.53	1	1	1.69			1.45	2.46	33	6.48	2	.38	1	.19	1.72	.34
Diseases of the respiratory system	44	35.12			1	.70	2.35	1.87	19	32.15						.36	.62	270	53.01	1	.19	1	.19	6.81	1.34
Diseases of the digestive system	148	118.12					3.83	3.06	100	169.20						2.08	3.52	764	150.00			2	.38	13.09	2.57
Diseases of the genito-urinary system	6	4.79					.52	.42	15	25.38						.54	.91	36	7.07	4	.75	1	.19	2.58	.51
Diseases of the skin and cellular tissue	61	48.68					1.59	1.27	89	150.59						2.50	4.23	491	96.41	1	.19			13.80	2.71
Diseases of the organs of locomotion	15	11.97					.67	.54	7	11.84						.11	.18	98	19.24	1	.19			3.15	.62
Malformations, etc							.19	.15																
Ill-defined diseases	16	12.77					.49	.39	5	8.46						.09	.15	42	8.25					.86	.17
Total for disease	845	674.38			4	2.81	39.25	31.32	487	824.03	3	4	6.77			15.75	26.65	3,809	747.89	32	6.04	19	3.58	115.42	22.66
External causes	39	31.13					3.02	2.41	76	128.60	5	5	8.46			3.15	5.33	653	128.22	4	.75	4	.75	17.02	3.34
Total for disease and external causes	884	705.51			4	2.81	42.27	33.73	563	952.62	8	9	15.23			18.90	31.98	4,462	876.10	36	6.79	23	4.34	132.44	26.01

TABLE NO. 65.—*Total movement of sick for the United States Army at home compared with that of foreign armies.*

	United States (continental), year 1910 (American troops, enlisted men).						British (United Kingdom), year 1909.		French (France), year 1907.		Prussian, year 1907.	
	White and colored.		White.		Colored.							
Mean strength	55,680		52,694		2,986		110,492		436,940		536,580	
	Total.	Hospital.	Total.	Hospital.	Total.	Hospital.	Total.	Hospital.	Total.	Hospital.	Total.	Hospital.
Admitted to sick report, total	50,070	38,720	47,599	36,624	2,471	2,096	92,548	41,809	[1] 931,838	335,517	320,256	131,318
Ratio per 1,000 of mean strength	899.25	695.40	903.31	695.03	827.53	701.94	837.60	378.39	2,132.65	767.88	596.8	244.7
Admitted for disease	39,841	.....	37,980	.....	1,861	.....	69,049	35,805	.....	.....	.....	.....
Ratio per 1,000 of mean strength	715.44	.....	720.77	.....	623.24	.....	624.92	324.05	.....	.....	.....	.....
Admitted for injury	10,229	.....	9,619	.....	610	.....	23,499	6,004	.....	.....	.....	.....
Ratio per 1,000 of mean strength	183.71	.....	182.54	.....	204.29	.....	212.68	54.34	.....	.....	.....	.....
Disposed of, all causes	50,731	.....	48,225	.....	2,506	.....	.....	.....	.....	.....	321,384	.....
Ratio per 1,000 of mean strength	911.12	.....	915.19	.....	839.25	.....	.....	.....	.....	.....	598.9	.....
Died, all causes	246	.....	224	.....	22	.....	363	.....	1,958	.....	968	.....
Ratio per 1,000 of mean strength	4.42	.....	4.25	.....	7.37	.....	2.92	.....	[2] 3.92	.....	[2] 1.8	.....
Ratio per 1,000 of all disposed of	4.85	.....	4.64	.....	8.78	.....	.....	.....	.....	.....	3.01	.....
Died of disease	128	.....	115	.....	13	.....	286	.....	1,720	.....	643	.....
Ratio per 1,000 of mean strength	2.30	.....	2.18	.....	4.35	.....	2.30	.....	3.44	.....	1.2	.....
Died of injury	118	.....	109	.....	9	.....	77	.....	238	.....	325	.....
Ratio per 1,000 of mean strength	2.12	.....	2.07	.....	3.01	.....	.62	.....	.47	.....	.6	.....
Died when on sick report or present with command	149	.....	134	.....	15	.....	.....	.....	1,645	.....	684	.....
Ratio per 1,000 of mean strength	2.68	.....	2.54	.....	5.02	.....	.....	.....	3.30	.....	1.3	.....
Ratio per 1,000 of all disposed of	2.94	.....	2.78	.....	5.99	.....	.....	.....	.....	.....	2.1	.....
Died when not on sick report or absent from command	97	.....	90	.....	7	.....	.....	.....	313	.....	284	.....
Accidental deaths	75	.....	74	.....	1	.....	.....	.....	160	.....	142	.....
Suicides	27	.....	24	.....	3	.....	30	.....	78	.....	183	.....
Returned to duty	48,575	.....	46,177	.....	2,398	.....	.....	.....	.....	.....	302,601	.....
Ratio per 1,000 of all disposed of	957.50	.....	957.53	.....	956.90	.....	.....	.....	.....	.....	941.6	.....
Otherwise disposed of	1,059	.....	1,010	.....	49	.....	.....	.....	.....	.....	17,815	.....
Ratio per 1,000 of all disposed of	20.87	.....	20.94	.....	19.55	.....	.....	.....	.....	.....	55.4	.....
Total days lost on account of sickness, all causes	690,036	623,063	658,735	594,457	31,301	28,606	1,145,297	875,817	6,528,579	5,055,492	4,876,587	.....
Constantly noneffective on account of sickness, all causes	1,890.51	1,707.02	1,804.75	1,628.65	85.76	78.37	3,137.80	2,399.50	17,886.52	13,850.66	13,360.51	.....
Ratio per 1,000 of mean strength	33.95	30.66	34.25	30.91	28.72	26.25	28.40	21.72	40.94	31.70	24.90	.....
Average days of treatment:												
For each soldier of mean strength	12.39	11.19	12.50	11.28	10.48	9.58	10.36	7.93	14.94	10.86	9.1	.....
For each case of sickness	13.78	16.09	13.84	16.23	12.67	13.65	12.83	20.95	7.01	14.50	14.8	.....
Discharges for disability, all causes	851	.....	814	.....	37	.....	1,308	.....	20,212	.....	23,755	.....
Ratio per 1,000 of mean strength	15.28	.....	15.45	.....	12.39	.....	10.51	.....	40.50	.....	44.3	.....
Total losses per 1,000 of mean strength	19.70	.....	19.70	.....	19.76	.....	13.43	.....	44.42	.....	46.1	.....

[1] Admissions in "chambre," French army, and in "quarters," American army, are included under "Total," and those in "infirmerie," French army, being synonomous with post hospital, American army, are included under "Hospital."

[2] The number of deaths is given as reported on International Table IX, as the ratios therefrom afford better comparison with the same figures for American troops.

TABLE NO. 65.—*Total movement of sick for the United States Army at home compared with that of foreign armies*—Continued.

	Bavarian, year 1909.		Austro-Hungarian, year 1909.		Spanish, year 1908.		Belgian, year 1907.		Russian, year 1908.		Japanese, year 1909.	
Mean strength	66,934				79,503		36,113		1,279,051		196,704	
	Total.	Hospital.	Total.	Hospital.	Total.	Hospital.	Total.	Hospital.	Total.	Hospital.	Total.	Hospital.
Admitted to sick report, total	30,785	15,455			85,290	30,823		15,045	564,837	519,231	168,438	29,361
Ratio per 1,000 of mean strength	459.9	230.9	845.2	387.0	1,072.7	387.69		416.61	441.6	405.9	856.30	149.26
Admitted for disease												
Ratio per 1,000 of mean strength												
Admitted for injury												
Ratio per 1,000 of mean strength												
Disposed of, all causes	30,814				85,428			15,112	568,354		169,550	
Ratio per 1,000 of mean strength	460.36				1,074.53			418.46			861.96	
Died, all causes	151				329	274		75	4,942		703	
Ratio per 1,000 of mean strength	2.26		3.18		4.13	3.44		[1] 2.08	3.86		3.57	
Ratio per 1,000 of all disposed of	4.90				3.85	3.21		4.96	7.4		4.15	
Died of disease	108				288	274		57	4,226		563	
Ratio per 1,000 of mean strength	1.61		2.21		3.61	3.44		1.58	3.30		2.86	
Died of injury	43				41			18	716		140	
Ratio per 1,000 of mean strength	.64		.97		.51			.50	.56		.71	
Died when on sick report or present with command	119							47			571	
Ratio per 1,000 of mean strength	1.78							1.3			2.90	
Ratio per 1,000 of all disposed of	3.86										3.37	
Died when not on sick report or absent from command	32							28			132	
Accidental deaths	19				28			11	474		38	
Suicides	24				13			7	242		102	
Returned to duty	28,477				79,694			13,225	512,282		161,793	
Ratio per 1,000 of all disposed of	924.2		865.9		932.87			875.1	901.4		954.25	
Otherwise disposed of	2,186				5,405			1,812	51,846		7,186	
Ratio per 1,000 of all disposed of	70.9		131.4		63.27			119.9	91.2		42.38	
Total days lost on account of sickness, all causes	542,877				827,429			305,749	13,557,940		2,223,860	
Constantly noneffective on account of sickness, all causes	1,487.33				2,266.93			837.67	37,145.0		6,092.77	
Ratio per 1,000 of mean strength	22.22				28.51			23.20	29.04		30.97	
Average days of treatment:												
For each soldier of mean strength	8.1		13.1		10.4			8.47	10.6		11.31	
For each case of sickness	17.1		14.9		25.4			20.32	23.8		12.78	
Discharges for disability, all causes	3,299				3,209			632	51,846		5,298	
Ratio per 1,000 of mean strength	49.3				40.24			17.50	40.5		26.94	
Total losses per 1,000 of mean strength	51.56				44.37			19.58	44.36		30.51	

[1] Death and discharge ratios are calculated on the average strength present and absent, total 55,680, white 52,694, colored 2,986,

TABLE No. 66.—*A comparison of the admission and death rates of the United States Army at home for certain special diseases with those of foreign armies.*

	Admission rates per 1,000 of mean strength.												Death rates per 1,000 of mean strength.											
	United States, continental (enlisted men).			British, 1909.	French, 1907.	Prussian, 1907.	Bavarian, 1909.	Austro-Hungary, 1909.	Spanish, 1908.	Belgian, 1907.	Russian, 1908.	Japanese, 1909.	United States, continental (enlisted men).			British, 1909.	French, 1907.	Prussian, 1907.	Bavarian, 1909.	Austro-Hungary, 1909.	Spanish, 1908.	Belgian, 1907.	Russian, 1908.	Japanese. 1909.
	White.	Colored.	Total.										White.	Colored.	Total.									
1. Alcoholismus acutus, including delirium tremens	23.00	5.02	22.04	0.9	0.35	0.11	0.19	(1)	0.05	0.11	0.1	.....	0.09	....	0.09	0.04	....	0.01	0.01	(1)	.....	.....	0.003	....
2. Appendicitis typhlitis, perityphlitis	5.01	4.02	4.96	.....	(1)	3.8	5.0	(1)	.37	(1)	1.9	0.93	.11	0.33	.13	.....	(1)	.10	.13	(1)	0.02	(1)	.07	0.04
3. Bronchitis acuta	30.57	25.12	30.28	[2] 12.4	88.11	47.6	36.4	94.3	31.52	33.73	22.7	37.89	.....	.....	.....	[2] 02.0	0.01	.....	.....	0.02	.08	.....	.....	.01
4. Cholera Asiatica	.....	.....	.....	.1	.....	.....	.....	.....	.....	.....	.2	.01	.....	.....	.....	.03	.....	.....	.....	.....	.....	.....	.04	.01
5. Cholera nostras	.04	.....	.04	.....	.....	.....	.....	.....	.....	.....	.002	.01	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.001	....
6. Diphtheria et croup	1.08	1.00	1.08	.3	1.43	.48	.39	.1	.02	.53	.1	.02	.....	.....	.....	.02	.02	.01	.01	.01	.....	.....	.01	....
7. Dysenteria	1.99	1.67	1.98	4.4	1.08	.01	.81	.1	.13	.06	.6	.53	.02	.....	.02	.09	.01	.....	.....	.....	.....	0.03	.04	.08
8. Erysipelas	.87	.33	.84	.3	2.32	.90	1.4	1.6	3.97	.91	3.2	.08	.02	.....	.02	.03	.03	.01	.04	.03	.03	.06	.07	.01
9. Febris intermittens (malaria)	15.18	3.68	14.56	75.4	.90	.08	.01	2.4	14.12	.14	37.8	24.16	.....	.....	.....	.14	.....	.....	.....	.....	.05	.....	.03	.04
10. Febris recurrens	.....	.....	.....	(1)	.....	.....	.....	(1)	.08	.....	.3	.....	.....	.....	.....	(1)	.....	.....	.....	.....	.....	.....	.003	....
11. Fractura ossium	11.48	7.03	11.24	(1)	(1)	6.3	5.3	2.8	2.10	(1)	1.6	1.75	.19	.....	.18	(1)	(1)	.02	.04	.03	.02	(1)	.01	....
12. Gonorrhea	102.17	107.17	102.44	38.3	18.35	12.2	10.3	30.0	28.81	19.99	27.5	16.53	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	....
13. Hernia	3.78	2.34	3.70	2.8	7.47	2.1	1.6	5.8	5.01	5.34	2.5	.79	.02	.....	.02	.....	.01	.....	.....	.....	.....	.....	.01	....
14. Influenza	22.98	18.42	22.74	13.2	22.86	13.7	11.5	2.1	25.81	17.92	29.5	3.29	.....	.....	.....	.01	.22	.01	.....	.....	.13	.....	.06	.02
15. Insolatio (Hitzschlag coup de chaleur)	.08	.....	.07	.8	.20	.12	.48	.1	.01	.25	.04	.83	.02	.....	.02	.07	.....	.01	.01	.....	.....	.....	.001	.04
16. Luxationes articulorum	3.45	5.69	3.57	(1)	(1)	1.3	1.1	.9	.84	(1)	.6	.75	.....	.....	.....	(1)	(1)	.....	.....	.....	.....	(1)	.001	....
17. Meningitis cerebro-spinalis epidemica	.08	.....	.07	.1	.21	.10	.49	(1)	.21	.14	.01	.21	.06	.....	.05	.04	.07	.05	.21	.....	.16	.08	.01	.12
18. Morbilli	5.98	.67	5.69	1.4	15.95	.46	.90	.6	3.53	.14	.3	1.01	.02	.....	.02	.01	.09	.....	.....	.....	.01	.....	.01	....
19. Parotitis epidemica	4.52	2.01	4.38	.3	28.32	.96	2.7	2.4	6.77	1.22	2.7	1.13	.....	.....	.....	.....	.01	.....	.....	.....	.....	.....	.003	....
20. Pleuritis	2.20	5.67	2.39	(1)	9.11	3.3	2.7	5.5	2.23	3.02	9.8	15.55	.04	.....	.04	(1)	.10	.04	.03	.08	.06	.....	.18	.19
21. Pneumonia, crouposa sive lobaris	2.22	4.02	2.32	[3] 3.2	3.60	5.0	5.3	4.1	1.81	2.52	5.3	5.53	.40	.67	.41	[3] .38	.32	.22	.28	.22	.11	.....	.38	.31
22. Rheumatismus, articulorum	12.20	18.42	12.54	6.7	24.09	7.0	8.9	16.5	18.50	14.95	5.6	6.51	.02	.....	.02	.03	.02	.02	.01	.01	.....	.03	.01	.01
23. Scarlatina	.25	.....	.23	1.2	6.70	.93	2.2	.6	.17	.47	0.1	.....	.....	.....	.....	.01	.15	.03	.10	.03	.01	.....	.01	....
24. Scorbutus	.....	.....	.....	.....	.....	.01	.....	.2	.....	.....	0.9	.....	.....	.....	.....	.01	.....	.....	.....	.....	.....	.....	.004	....
25. Syphilis	26.68	26.12	26.65	33.8	6.75	4.4	3.0	16.1	11.97	6.12	17.8	9.81	.04	.....	.04	.02	.....	.....	.....	.01	.....	.....	.02	....
26. Trachoma	.29	.....	.27	.0	.04	.32	.....	5.1	.02	.28	4.9	8.58	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	....
27. Tuberculosis pulmonum	2.90	1.34	2.82	1.6	5.19	1.4	1.2	1.4	5.84	3.52	2.5	3.67	.19	.33	.20	.20	.37	.11	.12	.36	.60	.44	.48	.16
28. Tuberculosis ceterorum organorum	.70	.67	.70	.3	2.25	.44	.31	3.1	.44	.49	1.4	1.14	.06	.....	.05	.06	.39	.09	.09	.15	.05	.08	.10	.18
29. Typhus abdominalis	2.41	.67	2.32	3.9	3.74	.41	.21	1.7	3.29	.86	4.4	6.58	.17	.....	.16	.58	.53	.06	.06	.21	.75	.17	.66	1.09
30. Typhus exanthematicus	.....	.....	.....	.....	.....	.....	.....	.....	.02	.....	.4	.01	.....	.....	.....	.....	.....	.....	.....	.01	.....	.....	.04	....

[1] Diseases not reported in table.

[2] Includes chronic bronchitis.

[3] Includes broncho-pneumonia.

TABLE No. 66.—*A comparison of the admission and death rates of the United States Army at home for certain special diseases with those of foreign armies*—Continued.

	Admission rates per 1,000 of mean strength.												Death rates per 1,000 of mean strength.											
	United States, continental (enlisted men).			British, 1909.	French, 1907.	Prussian, 1907.	Bavarian, 1909.	Austro-Hungary, 1909.	Spanish, 1908.	Belgian, 1907.	Russian, 1908.	Japanese, 1909.	United States, continental (enlisted men).			British, 1909.	French, 1907.	Prussian, 1907.	Bavarian, 1909.	Austro-Hungary, 1909.	Spanish, 1908.	Belgian, 1907.	Russian, 1908.	Japanese, 1909.
	White.	Colored.	Total.										White.	Colored.	Total.									
31. Ulcus molle	25.83	36.84	26.42	(1)	[2]2.73	2.1	1.5	8.6	29.10	.....	9.0	12.88	....	....	....	(1)	....	....	....	.....	....	....	.....	....
32. Variola	.17	1.00	.22	.1	.03	.....	.....	.....	.55	0.06	.2	.05	0.02	....	0.02	0.01	....	.....	.....	.....	0.01	....	0.03	....
33. Morbi auris	6.57	2.01	6.32	8.2	9.67	11.7	11.9	18.2	6.86	12.59	18.4	10.29	....	....	....	.02	0.03	0.01	0.01	0.01	....	0.03	.18	....
34. Morbi cordis	2.32	6.36	2.53	5.2	3.59	3.6	3.0	5.9	5.25	4.15	3.6	1.40	.19	1.67	.27	.27	.05	.02	.01	.04	.06	.03	.05	0.03
35. Morbi cutis	29.97	17.75	29.31	28.7	19.42	14.8	7.6	178.9	46.70	22.65	34.0	141.16	....	....	....	.00	....	....	....	.03	.03	....	.04	.01
36. Morbi mentis	1.54	2.34	1.58	.8	.61	1.3	1.4	1.3	.85	1.65	.6	.32	....	....	....	.01	.01	.01	....	.....	.....	....	.02	.01
37. Morbi oculi	11.60	10.38	11.53	6.5	6.72	13.0	7.6	31.5	14.11	13.87	14.7	29.34	....	....	....	.....	.....	.....	.....	.....	.....	.....	.....	.....
38. Morbi systemat. urin. et sexual (excluding venerie et syphilis)	13.95	14.73	13.99	10.2	9.34	6.0	5.2	14.7	8.62	8.75	7.4	10.62	.25	1.00	.29	.13	.08	.05	....	.06	.05	.03	.08	.04

[1] Diseases not reported in table.

[2] Includes venereal adenitis.

TABLE NO. 67.—*Showing the most important diseases, by departments, in the United States.*

	Absolute numbers—admissions by departments.														Proportionate numbers—admissions per 1,000 of mean strength.													
	Lakes.	East.	Gulf.	Dakota.	Missouri.	Texas.	Colorado.	Columbia.	California.	Camps of instruction.	General hospitals.	Total.	White.	Colored.	Lakes.	East.	Gulf.	Dakota.	Missouri.	Texas.	Colorado.	Columbia.	California.	Camps of instruction.	General hospitals.	Total.	White.	Colored.
1. Alcoholismus acutus, including delirium tremens	101	431	123	72	129	74	30	83	148	14	22	1,227	1,212	15	22.67	24.89	27.28	34.43	12.58	26.50	15.72	19.95	26.57	4.61	37.22	22.04	23.00	5.02
2. Appendicitis, typhlitis, perityphlitis	23	79	24	15	38	8	5	25	33	13	13	276	264	12	5.16	4.56	5.32	7.17	3.71	2.87	2.62	6.01	5.92	4.28	22.00	4.96	5.01	4.02
3. Bronchitis acuta	176	504	121	69	256	42	91	121	230	61	15	1,686	1,611	75	39.50	29.10	26.84	33.00	24.97	15.04	47.67	29.09	41.29	20.10	25.38	30.28	30.57	25.12
4. Cholera Asiatica	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
5. Cholera nostras	....	2	....	....	....	....	....	....	....	....	....	2	2	....	....	.12	....	....	....	....	....	....	....	....	....	.04	.04	....
6. Diphtheria et croup	....	31	2	1	6	1	....	2	14	....	3	60	57	3	....	1.79	.44	.48	.59	.36	....	.48	2.51	....	5.08	1.08	1.08	1.00
7. Dysenteria	9	13	13	10	9	10	5	9	11	18	3	110	105	5	2.02	.75	2.88	4.78	.88	3.58	2.62	2.16	1.97	5.93	5.08	1.98	1.99	1.67
8. Erysipelas	9	11	2	....	6	3	8	3	4	....	1	47	46	1	2.02	.64	.44	....	.59	1.07	4.19	.72	.72	....	1.69	.84	.87	.33
9. Febris intermittens (malaria)	27	257	77	8	164	50	23	81	68	49	7	811	800	11	6.06	14.84	17.08	3.83	16.00	17.91	12.05	19.47	12.21	16.15	11.84	14.56	15.18	3.68
10. Febris recurrens	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
11. Fractura ossium	55	188	31	26	125	25	19	44	57	43	13	626	605	21	12.34	10.86	6.88	12.43	12.19	8.95	9.95	10.58	10.23	14.17	22.00	11.24	11.48	7.03
12. Gonorrhea	636	1,655	420	226	1,082	271	146	317	627	230	94	5,704	5,384	320	142.73	95.57	93.15	108.08	105.55	97.06	76.48	76.20	112.57	75.81	159.05	102.44	102.17	107.17
13. Hernia	23	77	13	8	32	8	5	10	21	2	7	206	199	7	5.16	4.45	2.88	3.83	3.12	2.87	2.62	2.40	3.77	.66	11.84	3.70	3.78	2.34
14. Influenza	114	617	95	67	101	5	15	125	109	5	13	1,266	1,211	55	25.58	35.63	21.07	32.04	9.85	1.79	7.86	30.05	19.57	1.65	22.00	22.74	22.98	18.42
15. Insolatio (Hitzschlag coup de chaleur)	....	....	....	....	4	....	....	....	....	....	....	4	4	....	....	....	....	....	.39	....	....	....	....	....	....	.07	.08	....
16. Luxationes articulorum	17	61	18	20	28	7	6	19	13	10	....	199	182	17	3.82	3.52	3.99	9.56	2.73	2.51	3.14	4.57	2.33	3.30	....	3.57	3.45	5.69
17. Meningitis cerebro-spinalis epidemica	2	....	....	1	....	....	....	1	....	....	....	4	4	....	.45	....	....	.48	....	....	....	.24	....	....	....	.07	.08	....
18. Morbilli	79	47	11	15	44	2	18	17	70	2	12	317	315	2	17.73	2.71	2.44	7.17	4.29	.72	9.43	4.09	12.57	.66	20.30	5.69	5.98	.67
19. Parotitis epidemica	35	103	3	2	39	2	....	18	36	3	3	244	238	6	7.85	5.95	.67	.96	3.80	.72	....	4.33	6.46	.99	5.08	4.38	4.52	2.01
20. Pleuritis	15	48	9	3	21	1	5	5	11	9	6	133	116	17	3.37	2.77	2.00	1.43	2.05	.36	2.62	1.20	1.97	2.97	10.15	2.39	2.20	5.67
21. Pneumonia crouposa sive lobaris	20	40	8	6	35	2	4	2	7	2	3	129	117	12	4.49	2.31	1.77	2.87	3.41	.72	2.10	.48	1.26	.66	5.08	2.32	2.22	4.02
22. Rheumatismus articulorum	85	216	22	19	150	24	40	26	61	38	17	698	643	55	19.08	12.47	4.88	9.08	14.63	8.60	20.95	6.25	10.95	12.52	28.76	12.54	12.20	18.42
23. Scarlatina	1	4	....	....	4	....	3	....	1	....	....	13	13	....	.22	.23	....	....	.39	....	1.57	....	.18	....	....	.23	.25	....
24. Scorbutus	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
25. Syphilis	150	505	130	71	242	70	35	80	137	33	31	1,484	1,406	78	33.66	29.16	28.83	33.95	23.61	25.07	18.33	19.23	24.60	10.88	52.45	26.65	26.68	26.12
26. Trachoma	2	5	1	....	3	....	2	....	2	....	....	15	15	....	.45	.29	.22	....	.29	....	1.05	....	.36	....	....	.27	.29	....
27. Tuberculosis pulmonum	16	39	8	5	18	5	4	18	24	5	15	157	153	4	3.59	2.25	1.77	2.39	1.76	1.79	2.10	4.33	4.31	1.65	25.38	2.82	2.90	1.34
28. Tuberculosis ceterorum organorum	2	12	....	3	11	....	....	2	5	2	2	39	37	2	.45	.69	....	1.43	1.07	....	....	.48	.90	.66	3.38	.70	.70	.67

TABLE NO. 67.—*Showing the most important diseases, by departments, in the United States*—Continued.

	Absolute numbers—admissions by departments.														Proportionate numbers—admissions per 1,000 of mean strength.												
	Lakes.	East.	Gulf.	Dakota.	Missouri.	Texas.	Colorado.	Columbia.	California.	Camps of instruction.	General hospitals.	Total.	White.	Colored.	Lakes.	East.	Gulf.	Dakota.	Missouri.	Texas.	Colorado.	Columbia.	California.	Camps of instruction.	General hospitals.	Total.	White.	Colored.
29. Typhus abdominalis	16	35	9	2	43	4	3	4	1	9	3	129	127	2	3.59	2.02	2.00	0.96	4.19	1.43	1.57	0.96	0.18	2.97	5.08	2.32	2.41	0.67
30. Typhus exanthematicus																												
31. Ulcus molle	151	393	194	36	240	202	23	47	128	40	17	1,471	1,361	110	33.89	22.69	43.03	17.22	23.41	72.35	12.05	11.30	22.98	13.18	28.76	26.42	25.83	36.84
32. Variola		2	4				1	5				12	9	3		.12	.89				.52	1.20				.22	.17	1.00
33. Morbi auris	49	112	35	28	28	11	20	7	35	18	9	352	346	6	11.00	6.47	7.76	13.39	2.73	3.94	10.48	1.68	6.28	5.93	15.23	6.32	6.57	2.01
34. Morbi cordis	25	39	9	2	14	1	7	13	11	7	13	141	122	19	5.61	2.25	2.00	.96	1.37	.36	3.67	3.12	1.97	2.31	22.00	2.53	2.32	6.36
35. Morbi cutis	178	622	163	55	203	34	45	70	173	79	10	1,632	1,579	53	39.95	35.92	36.15	26.30	19.80	12.18	23.57	16.83	31.06	26.04	16.92	29.31	29.97	17.75
36. Morbi mentis	8	23	3	5	10	4	1	13	11	2	8	88	81	7	1.80	1.33	.67	2.39	.98	1.43	.52	3.12	1.97	.66	13.54	1.58	1.54	2.34
37. Morbi oculi	83	201	59	30	78	20	29	27	76	27	12	642	611	31	18.63	11.61	13.08	14.35	7.61	7.16	15.19	6.49	13.64	8.90	20.30	11.53	11.60	10.38
38. Morbi systemat. urin. et sexual (excluding venerie et syphilis)	79	287	44	31	104	25	26	79	73	18	13	779	735	44	17.73	16.57	9.76	14.83	10.15	8.95	13.62	18.99	13.11	5.93	22.00	13.99	13.95	14.73

TABLE NO. 68.—*Comparative figures, Army, by years, 1906–1910.*

ABSOLUTE NUMBERS.

Army.	Mean strength.	Admissions to sick report.		Discharges on certificate of disability.		Deaths.		Total losses.		Total days.				Constantly noneffective.			
										From all causes.		Excluding injuries, venereal diseases, vaccinia, and alcoholism.		From all causes.		Excluding injuries, venereal diseases, vaccinia, and alcoholism.	
		From all causes.	Excluding injuries, venereal diseases, vaccinia, and alcoholism.	From all causes.	Excluding injuries, venereal diseases, vaccinia, and alcoholism.	From all causes.	Excluding injuries, venereal diseases, vaccinia, and alcoholism.	From all causes.	Excluding injuries, venereal diseases, vaccinia, and alcoholism.	Total.	In hospital.	Total.	In hospital.	Total.	In hospital.	Total.	In hospital.
Year 1910.....	71,534	67,940	39,754	1,007	776	320	165	1,327	941	938,210	850,301	483,979	442,868	2,570.44	2,329.59	1,325.97	1,213.34
1909.....	74,319	79,000	46,809	1,270	918	370	221	1,640	1,139	1,125,333	994,411	597,032	534,125	3,083.10	2,724.41	1,635.70	1,403.36
1908.....	65,406	77,704	46,110	1,248	928	414	217	1,662	1,195	1,021,690	888,590	566,864	502,635	2,791.50	2,427.84	1,548.81	1,373.32
1907.....	53,803	65,546	39,774	1,107	805	319	177	1,426	982	906,750	781,140	512,030	453,791	2,484.25	2,140.10	1,402.82	1,243.36
1906.....	56,443	72,071	45,506	1,523	1,182	358	183	1,881	1,365	1,025,815	850,393	591,750	505,930	2,810.45	2,329.84	1,621.23	1,386.11

TABLE No. 68.—*Comparative figures, Army, by years, 1906–1910*—Continued.

PROPORTIONAL NUMBERS.

Army.	Mean strength.	Ratios per 1,000 of mean strength.												Average number of days lost.			
		Admissions to sick report.		Discharges on certificate of disability.		Deaths.		Total losses.		Noneffective from sickness.				From all causes.		Excluding injuries, venereal diseases, vaccinia, and alcoholism.	
										From all causes.		Excluding injuries, venereal diseases, vaccinia, and alcoholism.					
		From all causes.	Excluding injuries, venereal diseases, vaccinia, and alcoholism.	From all causes.	Excluding injuries, venereal diseases, vaccinia, and alcoholism.	From all causes.	Excluding injuries, venereal diseases, vaccinia, and alcoholism.	From all causes.	Excluding injuries, venereal diseases, vaccinia, and alcoholism.	Total.	In hospital.	Total.	In hospital.	For each soldier.	For each case.	For each soldier.	For each case.
Year 1910	71,534	949.76	555.74	14.02	10.81	4.46	2.30	18.48	13.11	35.93	32.57	18.53	16.96	13.12	13.81	6.77	12.17
1909	74,319	1,062.99	629.84	16.84	12.18	4.91	2.93	21.75	15.11	41.48	36.66	22.01	19.69	15.14	14.24	8.03	12.75
1908	65,406	1,188.03	704.98	18.48	13.75	6.13	3.21	24.61	16.96	42.68	37.12	23.68	21.00	15.62	13.15	8.67	12.29
1907	53,803	1,218.26	739.25	20.15	14.65	5.81	3.22	25.96	17.87	46.17	39.78	26.08	23.11	16.85	13.83	9.52	12.87
1906	56,443	1,276.88	806.23	26.00	20.18	6.11	3.12	32.11	23.30	49.79	41.28	28.72	24.56	18.17	14.23	10.48	13.00

Very respectfully,

GEO. H. TORNEY,
Surgeon General, United States Army.

The SECRETARY OF WAR.

INTERNATIONAL MILITARY MEDICAL STATISTICS FOR THE YEAR 1910.

The following tables are those agreed upon at the International Commission for the Unification of the Medical Statistics of Armies held at Budapest in 1894, at Madrid in 1903, and modified by the last meeting, held at Berlin in 1907. They are calculated for the United States Army proper (white and colored) and include enlisted men only. Dispositions include cases remaining from last year. Deaths include suicides and accidents. Days lost include those lost this year by cases remaining from last year.

Table I shows in absolute numbers, by departments, the mean strength of the command, the admissions to quarters, to hospital, and total admissions; the disposition of the sick, total, and the number returned to duty, died, and otherwise disposed of, and the total number of days of sickness.

Table II gives the same data in ratios per 1,000, and also shows the days lost per soldier and per admission.

Table III shows, by arms of service, the mean strength, the total admissions, and those to hospital only, the total dispositions, and the number of those returned to duty, and the number that died.

Table IV gives the same data as Table III by months.

Table V shows for each of 50 of the larger garrisons the mean strength, admissions to hospital, total admissions, and the deaths.

Table VI shows for each of the 38 diseases or disease groups agreed upon by the International Commission the number remaining under treatment at the commencement and close of the current year, the admissions and dispositions for the year, the total sick days, and the average number of days per case.

Table VII shows the admissions, by arms of service, for the diseases and disease groups referred to in Table VI.

Table VIII shows the same data as Table VII by months.

Table IX shows deaths by rank, by length of service, and by age.

Table X shows the same data as Table IX for discharges for physical disability.

INTERNATIONAL TABLE I.—*Movement of sick by Army corps (departments), absolute numbers.*

Department.	Mean strength.	Admitted sick.			Sick disposed of.				Total days sick.
		Total.	To hospital.	To quarters.	Returned to duty (recovered).	Died.	Otherwise disposed of.	Total.	
United States (excluding Alaska):									
Department of the East	17,317	15,918	12,583	3,335	15,423	73	398	15,894	173,514
Department of the Gulf	4,509	4,329	3,574	755	4,231	20	101	4,352	53,415
Department of the Lakes	4,456	5,106	4,284	822	4,915	16	200	5,131	52,320
Department of the Missouri	10,251	7,872	7,158	714	7,778	42	203	8,023	106,780
Department of Dakota	2,091	2,155	1,736	419	2,077	7	45	2,129	27,388
Department of Texas	2,792	2,103	1,949	154	2,101	14	45	2,160	31,180
Department of the Colorado	1,909	1,795	1,417	378	1,764	7	84	1,855	24,131
Department of California	5,570	4,696	2,262	2,434	2,629	15	148	2,792	30,565
Department of the Columbia (excluding Alaska)	4,160	3,160	2,630	530	3,098	10	52	3,160	41,204
Camps of instruction	2,034	2,221	468	1,753	1,739	11	19	1,769	10,761
General hospitals	591	715	659	56	2,820	31	770	3,621	138,778
Total	55,680	50,070	38,720	11,350	48,575	246	2,065	50,886	690,036
Alaska	1,081	489	343	146	494	3	5	502	6,711
Philippines Division:									
Department of Luzon	7,122	9,112	7,382	1,730	7,764	30	207	8,001	96,558
Department of the Visayas	1,705	2,630	2,429	201	2,444	7	82	2,533	28,100
Department of Mindanao	3,298	3,339	2,939	400	3,179	22	56	3,257	45,060
Interisland transports	58	14	12	2	8			8	86
Division hospital, Manila	94	161	159	2	1,206	5	65	1,276	33,880
Total	12,277	15,256	12,921	2,335	14,601	64	410	15,075	203,684
Porto Rico	23	9	8	1	9			9	141
Hawaii	1,220	1,232	972	260	1,145	3	25	1,173	22,211
Army transports	1,253	884	868	16	840	4	7	851	15,427
United States Army	71,534	67,940	53,832	14,108	65,664	320	2,512	68,496	938,210

INTERNATIONAL TABLE II.—*Movement of sick by Army corps (departments), proportionate numbers.*

Department.	In 1,000 of mean strength.			In 1,000 disposed of.			Days lost.	
	Total admissions.	Admissions to hospitals.	Deaths.	Returned to duty (recovered).	Died.	Otherwise disposed of.	Per soldier.	Per admission.
United States (excluding Alaska):								
Department of the East	919.21	726.63	4.22	970.37	4.59	25.04	10.02	10.90
Department of the Gulf	960.08	792.64	4.44	972.20	4.60	23.21	11.85	12.34
Department of the Lakes	1,145.87	961.40	3.59	957.90	3.12	38.98	11.74	10.25
Department of the Missouri	767.93	698.27	4.10	969.46	5.24	25.30	10.42	13.56
Department of Dakota	1,030.61	830.22	3.35	975.58	3.29	21.14	13.10	12.71
Department of Texas	753.22	698.07	5.01	972.69	6.48	20.83	11.17	14.83
Department of the Colorado	940.28	742.27	3.67	950.94	3.77	45.28	12.64	13.44
Department of California	843.09	406.10	2.69	941.62	5.37	53.01	5.49	6.51
Department of the Columbia (excluding Alaska)	759.62	632.21	2.40	980.38	3.16	16.46	9.90	13.04
Camps of instruction	732.04	154.26	3.63	983.04	6.22	10.74	3.55	4.85
General hospitals	1,209.81	1,115.06	.....	778.79	8.56	212.65	.....	.....
Total	899.25	695.40	4.42	954.58	4.83	40.58	12.39	13.78
Alaska	452.36	317.30	2.65	984.06	5.98	9.96	6.21	13.72
Philippines Division:								
Department of Luzon	1,279.42	1,036.51	4.21	970.38	3.75	25.87	13.56	10.60
Department of the Visayas	1,542.52	1,424.63	4.11	964.86	2.76	32.37	16.48	10.68
Department of Mindanao	1,012.43	891.15	6.67	976.05	6.76	17.19	13.66	13.50
Interisland transports	241.38	206.90	.....	1,000.00	.....	.....	1.48	6.14
Division hospital	1,712.77	1,691.49	.....	945.14	3.92	50.94	.....	.....
Total	1,242.65	1,052.46	5.19	968.56	4.25	27.19	16.59	13.35
Porto Rico	391.30	347.83	.....	1,000.00	.....	.....	6.13	15.67
Hawaii	1,009.84	796.72	2.45	976.13	2.56	21.31	18.21	18.03
Army transports	705.51	692.74	2.81	987.07	4.70	8.23	12.31	17.45
United States Army	949.76	752.54	4.46	958.65	4.67	36.67	13.12	13.81

INTERNATIONAL TABLE III.—*Movement of sick by arms of service.*

Arms of service.	Absolute numbers.						Proportionate numbers.				
	Mean strength.	Sick admissions.		Sick disposed of.			Per 1,000 of mean strength.			Per 1,000 of sick disposed of.	
		Total.	To hospital.	Total.	Fit for duty (recovered).	Deaths.	Total sick admissions.	Admissions to hospital.	Deaths.[1]	Fit for duty (recovered).	Deaths.
Infantry	23,592	21,671	17,355	21,985	21,027	102	918.57	735.63	4.30	956.43	4.64
Cavalry	11,618	11,756	9,495	11,833	11,387	57	1,011.88	817.27	4.88	962.31	4.82
Coast Artillery	18,185	16,651	12,369	16,781	16,185	82	915.64	680.17	4.51	964.48	4.89
Field Artillery	4,853	5,280	4,259	5,350	5,153	18	1,087.98	877.60	3.69	963.18	3.36
Engineers	1,814	1,753	1,022	1,749	1,649	11	966.37	563.40	6.05	942.83	6.29
Ordnance	713	498	156	498	479	7	698.46	218.79	9.82	961.84	14.06
Signal Corps	1,156	757	597	762	735	4	654.84	516.43	3.42	964.57	5.25
Hospital Corps	3,443	2,357	1,999	2,367	2,206	16	684.58	580.60	4.64	931.98	6.76
Others	6,160	7,217	6,580	7,171	6,843	23	1,171.60	1,068.18	3.73	954.25	3.21
Total	71,534	67,940	53,832	68,496	65,664	320	949.76	752.54	4.46	958.66	4.67

[1] Ratios for deaths based on mean strength present and absent; total 71,814.

INTERNATIONAL TABLE IV.—*Movement of sick, by months. American troops at home.*

Month.	Absolute numbers.						Proportionate numbers.				
		Sick admissions.		Sick disposed of.			Per 1,000 of mean strength.			Per 1,000 sick disposed of.	
	Mean strength.	Total.	To hospital.	Total.	Fit for duty (recovered).	Deaths.	Total sick admissions.	Admissions to hospital.	Deaths.	Fit for duty (recovered).	Deaths.
January	58,107	4,683	3,721	4,729	4,504	17	80.59	64.04	0.29	965.10	3.59
February	58,282	4,718	3,789	4,743	4,474	17	80.96	65.02	.29	943.28	3.58
March	57,790	5,411	4,197	5,478	5,231	20	93.63	72.62	.35	954.91	3.65
April	56,801	4,402	3,432	4,484	4,278	19	77.50	60.42	.33	956.02	4.06
May	57,796	3,968	3,178	4,064	3,888	23	68.66	54.99	.40	956.69	5.66
June	56,414	3,601	2,818	3,775	3,600	26	63.83	49.95	.46	953.64	6.89
July	53,400	3,875	2,656	4,014	3,931	41	72.57	49.74	.77	961.88	10.21
August	51,200	3,763	2,389	3,713	3,574	21	73.50	46.66	.41	962.56	5.65
September	53,874	3,803	2,927	3,706	3,568	15	70.59	54.33	.28	962.76	4.05
October	54,640	3,910	3,104	3,863	3,695	14	71.56	56.81	.26	956.51	3.62
November	54,969	3,835	3,084	3,899	3,719	15	69.76	56.10	.27	953.83	3.85
December	54,880	4,101	3,425	4,127	3,923	18	74.73	62.41	.33	950.57	4.36
Total	55,680	50,070	38,720	50,795	48,575	246	899.25	695.40	4.42	956.51	4.84

INTERNATIONAL TABLE IV (continued).—*Movement of sick, by months, American troops in the Philippine Islands.*

Month.	Absolute numbers.						Proportionate numbers.				
		Sick admissions.		Sick disposed of.			Per 1,000 of mean strength.			Per 1,000 sick disposed of.	
	Mean strength.	Total.	To hospital.	Total.	Fit for duty (recovered).	Deaths.	Total sick admissions.	Admissions to hospital.	Deaths.[1]	Fit for duty (recovered).	Deaths.
January	12,263	1,351	1,164	1,331	1,294	5	110.17	94.92	0.37	972.20	3.76
February	12,410	1,182	742	1,146	1,118	5	95.25	59.79	.40	975.57	4.36
March	12,338	1,340	1,072	1,261	1,224	4	108.61	86.89	.31	970.66	3.17
April	12,078	1,068	895	1,137	1,113	4	88.42	74.10	.32	978.89	3.52
May	12,319	1,387	1,203	1,293	1,260	6	112.59	97.66	.49	974.48	4.64
June	12,496	1,454	1,266	1,421	1,378	6	116.36	101.31	.50	969.74	4.22
July	12,375	1,413	1,257	1,479	1,435	5	114.18	101.58	.42	970.25	3.38
August	12,122	1,290	1,175	1,227	1,180	10	106.42	96.94	.85	961.69	8.15
September	11,754	1,235	1,036	1,202	1,162	3	105.07	88.14	.26	966.72	2.50
October	12,140	1,264	1,078	1,231	1,188	5	104.12	88.80	.42	965.07	4.06
November	12,623	1,153	1,053	1,200	1,157	6	91.34	83.41	.49	964.17	5.00
December	12,400	1,119	980	1,122	1,092	5	90.24	79.03	.40	973.26	4.46
Total	12,277	15,256	12,921	15,050	14,601	64	1,242.65	1,052.46	5.19	970.17	4.25

[1] Ratios for deaths based on mean strength present and absent; total 12,333.

INTERNATIONAL TABLE V.—*Movement of sick in the larger garrisons.*

Garrisons.	Mean strength.	Total admissions.		Admissions to hospital.		Deaths.	
		Absolute numbers.	Per 1,000 of mean strength.	Absolute numbers.	Per 1,000 of mean strength.	Absolute numbers.	Per 1,000 of mean strength.
Presidio of San Francisco, Cal.	2,491	2,069	830.59			2	0.80
Fort D. A. Russell, Wyo.	2,416	2,024	837.75	1,946	805.46	17	7.04
Fort Leavenworth, Kans.	2,096	1,225	584.45	1,110	529.58	7	3.34
Fort Riley, Kans.	2,054	1,311	638.27	1,147	558.42	3	1.46
Fort Sam Houston, Tex.	1,692	1,268	749.41	1,195	706.26	9	5.32
Fort Monroe, Va.	1,349	1,210	896.96	1,046	775.39	17	12.60
Vancouver Barracks, Wash.	1,185	1,077	908.86	924	779.75	3	2.53
Fort Sheridan, Ill.	1,121	1,047	933.99	853	760.93	3	2.68
Columbus Barracks, Ohio.	1,066	2,173	2,038.46	2,140	2,007.50	5	4.69
Fort Snelling, Minn.	1,055	1,071	1,015.17	770	729.86	5	4.74
Presidio of Monterey, Cal.	1,014	666	656.80	604	595.66	5	4.93
Jefferson Barracks, Mo.	1,002	956	954.09	905	903.19	4	3.99
Fort Slocum, N. Y.	990	1,979	1,998.99	1,838	1,856.56	3	3.03
Fort Hancock, N. J.	864	449	519.68	364	421.30	3	3.47
Fort Myer, Va.	845	686	811.83	609	720.71	1	1.18
Fort Benjamin Harrison, Ind.	825	556	673.94	344	416.97	3	3.64
West Point (Military Academy), N. Y.	754	622	824.93	482	639.26	1	1.33
Fort Ethan Allen, Vt.	750	882	1,176.00	666	888.00	4	5.33
Fort Douglas, Utah.	746	544	729.22	389	521.45	1	1.34
Fort Totten, N. Y.	742	762	1,026.95	448	603.77	1	1.35
Plattsburg Barracks, N. Y.	726	466	641.87	408	561.98	4	5.51
Fort Worden, Wash.	715	260	363.64	242	338.46	3	4.20
Fort Oglethorpe, Ga.	707	591	835.93	533	753.89	5	7.07
Fort McKinley, Me.	671	525	782.41	493	734.72		
Fort Adams, R. I.	640	483	754.69	422	659.37	1	1.56
Fort McPherson, Ga.	637	634	995.29	564	885.40	3	4.71
Fort Des Moines, Iowa.	635	812	1,278.74	553	870.87	7	11.02
Fort Gibbon, Alaska.	261	115	440.61	87	333.33	2	7.66
Fort William H. Seward, Alaska	261	98	375.48	82	314.18		
Fort Liscum, Alaska.	190	73	384.21	45	236.84		
Fort St. Michael, Alaska.	157	32	203.82	30	191.08	1	6.37
Fort Davis, Alaska.	154	116	753.25	63	409.09		
Fort Egbert, Alaska.	112	73	651.79	37	330.36		
Schofield Barracks, Hawaii.	605	594	981.82	450	743.80	3	4.96
Fort Shafter, Hawaii.	305	282	924.59	200	655.74	1	3.28
Fort Ruger, Hawaii.	210	211	1,004.76	177	842.86		
Fort De Russey, Hawaii.	156	167	1,070.51	146	935.90		
Fort William McKinley, P. I.	2,788	3,403	1,220.59	3,010	1,079.63	11	3.95
Fort Mills, P. I.	1,420	1,680	1,183.10	1,288	907.04	5	3.52
Camp Keithley, P. I.	949	937	987.36	849	894.63	1	1.05
Camp Stotsenburg, P. I.	933	1,864	1,997.86	1,597	1,711.68	4	4.29
Augur Barracks, P. I.	925	1,059	1,144.86	923	997.84	4	4.32
Camp Jossman, P. I.	862	1,646	1,909.51	1,461	1,694.90	4	4.64
Camp McGrath, P. I.	641	507	790.95	398	620.90	2	3.12
Cuartel de Espana, P. I.	532	585	1,099.62	404	759.40	2	3.76
Ludlow Barracks, P. I.	529	545	1,030.25	455	860.11	5	9.45
Camp Overton, P. I.	487	319	655.03	293	601.64	4	8.21
Warwick Barracks, P. I.	417	578	1,386.09	545	1,306.95	2	4.80
Pettit Barracks, P. I.	411	397	965.94	326	793.19	2	4.87
Regan Barracks, P. I.	387	206	532.30	200	516.80		
Camp Wilhelm, P. I.	354	295	833.33	291	822.03	5	14.12
Camp Gregg, P. I.	351	633	1,803.42	550	1,566.95	4	11.40
Camp Wallace, P. I.	349	382	1,094.56	361	1,034.38	2	5.73
Davao, P. I.	344	327	950.58	288	837.21	5	14.53
Camp Connell, P. I.	340	219	644.12	210	617.65	1	2.94
Torrey Barracks, P. I.	336	199	592.26	174	517.86	4	11.90

INTERNATIONAL TABLE VI.—*Movement of sick according to most important diseases.*

No. international nomenclature.	Diseases of the international nosological table.	Absolute numbers.								Proportionate numbers.					
		Remaining at close of 1909.	Admitted in 1910.	Total remaining and admitted.	Disposed of in 1910.				Remaining at close of 1910.	Total days sick in 1910.	Per 1,000 of mean strength.		Per 1,000 disposed of.			Average days of treatment.
					Fit for duty.	Died.	Otherwise.	Total.			Admissions.	Deaths.	Fit for duty.	Died.	Otherwise.	
1	Alkoholismus acutus, including delirium tremens	13	1,598	1,611	1,542	8	47	1,597	14	6,769	22.34	0.11	965.56	5.01	29.42	4.24
2	Appendicitis, typhlitis, and perityphlitis	36	404	440	358	11	27	396	44	12,603	5.65	.15	904.04	27.78	68.18	31.20
3	Bronchitis acuta	53	1,981	2,034	1,965	.....	30	1,995	39	12,744	27.69	.....	984.96	.....	15.04	6.43
4	Cholera Asiatica	.....	3	3	2	1	.....	3	.....	48	.04	.01	666.67	.....	33.33	16.00
5	Cholera nostras	.....	3	3	3	.....	.....	3	.....	10	.04	.....	1,000.00	.....	.....	3.33
6	Diphtheria et croup	1	61	62	60	.....	.....	60	2	1,349	.85	.....	1,000.00	.....	.....	22.11
7	Dysenteria	35	369	404	346	5	27	378	26	11,334	5.16	.07	915.34	13.23	71.43	30.72
8	Erysipelas	2	52	54	41	1	6	48	6	1,091	.73	.01	854.17	20.83	125.00	20.98
9	Febris intermittens (malaria) [1]	10	1,675	1,685	1,609	.....	55	1,664	21	12,489	23.41	.....	966.95	.....	33.05	7.46
10	Febris recurrens	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
11	Fractura ossium	109	760	869	732	14	33	779	90	329.70	10.62	.19	939.67	17.97	42.36	43.38
12	Gonorrhea	548	8,106	8,654	7,885	.....	355	8,240	414	176,998	113.32	.....	956.92	.....	43.08	21.83
13	Hernia	29	248	277	231	1	27	259	18	10,927	3.47	.01	891.89	3.86	104.24	44.07
14	Influenza	28	1,319	1,347	1,289	.....	13	1,302	45	7,306	18.44	.....	990.02	.....	9.98	5.54
15	Insolatio (Hitzschlag, coup de chaleur)	.....	5	5	4	1	.....	5	.....	27	.07	.01	800.00	200.00	.....	5.40
16	Luxationes articulorum	9	236	245	225	.....	7	232	13	3,671	3.30	.....	969.83	.....	30.17	15.55
17	Meningitis, cerebro-spinalis, epidemica	.....	4	4	1	3	.....	4	.....	77	.06	.04	250.00	750.00	.....	19.25
18	Morbilli	14	355	369	346	1	20	367	2	6,173	4.96	.01	942.78	2.73	54.49	17.39
19	Parotitis epidemica	1	261	262	245	.....	7	252	10	4,121	3.65	.....	972.22	.....	27.78	15.79
20	Pleuritis	8	159	167	149	2	6	157	10	3,046	2.22	.03	949.05	12.74	38.21	19.16
21	Pneumonia crouposa sive lobaris	17	150	167	116	25	9	150	17	4,463	2.10	.35	773.33	166.67	60.00	29.75
22	Rheumatismus articulorum	54	820	874	770	1	58	829	45	21,097	11.46	.01	928.83	1.21	69.96	25.72
23	Scarlatina	5	13	18	14	.....	1	15	3	487	.18	.....	933.33	.....	66.67	37.46
24	Scorbutus	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
25	Syphilis	234	2,117	2,351	2,029	2	133	2,164	187	76,581	29.59	.03	937.62	.92	61.46	36.18
26	Trachoma	8	24	32	24	.....	7	31	1	2,107	.34	.....	774.19	.....	225.81	87.80
27	Tuberculosis pulmonum [2]	204	223	427	15	16	292	323	104	37,123	3.12	.22	46.44	49.54	904.02	166.47
28	Tuberculosis ceterorum organorum	12	48	60	28	4	14	46	14	4,742	.67	.06	608.70	86.96	304.34	98.79
29	Typhus abdominalis	58	168	223	165	12	10	187	36	12,545	2.35	.17	882.35	64.17	53.48	74.67
30	Typhus exanthematicus	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
31	Ulcus molle	151	2,292	2,443	2,228	.....	91	2,319	124	46,870	32.04	.....	960.76	.....	39.24	20.45
32	Variola	1	15	16	12	1	1	14	2	495	.21	.01	857.14	71.43	71.43	33.00
33	Morbi auris	17	503	520	463	1	30	494	26	9,127	7.03	.01	937.25	2.02	60.73	18.15
34	Morbi cordis [3]	19	161	180	92	17	52	161	19	6,325	2.26	.24	571.43	105.59	322.98	35.29

35	Morbi cutis [4]	64	2,193	2,257	2,182	.....	41	2,223	34	19,665	30.65	.....	981.56	.....	18.44	8.97
36	Morbi mentis [5]	14	114	128	17	.....	85	102	26	7,822	1.59	.....	166.67	.....	833.33	68.62
37	Morbi oculi	36	843	879	804	.....	37	841	38	12,786	11.78	.....	956.00	.....	44.00	15.17
38	Morbi systemat. urin. et sexual (excluding venerie et syphilis)	42	998	1,040	926	18	54	998	42	17,619	13.95	.25	927.86	18.04	54.10	17.65

[1] Malarial fever, intermittent only.
[2] Includes tuberculosis of the larynx.
[3] Includes pericarditis and endocarditis.
[4] Includes diseases of the skin proper.
[5] Includes insanity only.

INTERNATIONAL TABLE VII.—*Most important diseases, by arms of service.*

No. international nomenclature.	Diseases of the international nosological table.	Absolute numbers—Admissions by arms of service.									Proportionate numbers—Admissions per 1,000 of mean strength.								
		Infantry.	Cavalry.	Coast Artillery.	Field Artillery.	Engineers.	Ordnance.	Signal Corps.	Hospital Corps.	Others.	Infantry.	Cavalry.	Coast Artillery.	Field Artillery.	Engineers.	Ordnance.	Signal Corps.	Hospital Corps.	Others.
1	Alkolismus acutus, including delirium tremens	637	136	542	41	32	26	12	88	84	27.00	11.71	29.80	8.45	17.64	36.47	10.38	25.56	13.64
2	Appendicitis, typhlitis, and perityphlitis	107	84	97	27	19	1	4	30	35	4.54	7.23	5.33	5.56	10.47	1.40	3.46	8.71	5.68
3	Bronchitis acuta	521	298	635	120	39	32	23	73	240	22.08	25.65	34.92	24.73	21.50	44.88	19.90	21.20	38.96
4	Cholera Asiatica	.....	.....	.....	3	.....	.....	.....	.....	.....	.....	.....	.....	.62	.....	.....	.....	.....	.....
5	Cholera nostras	.....	.....	3	.....	.....	.....	.....	.....	.....	.....	.....	.16	.....	.....	.....	.....	.....	.....
6	Diphtheria et croup	6	7	18	5	1	.....	.....	6	18	.25	.60	.99	1.03	.55	.....	.....	1.74	2.92
7	Dysenteria	201	48	45	22	21	2	4	20	6	8.52	4.13	2.47	4.53	11.58	2.81	3.46	5.81	.97
8	Erysipelas	20	5	10	1	.....	.....	1	4	11	.85	.43	.55	.21	.....	.....	.87	1.16	1.79
9	Febris intermittens (malaria) [1]	443	518	307	136	76	4	32	39	120	18.78	44.58	16.88	28.02	41.89	5.61	27.68	11.33	19.48
10	Febris recurrens	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
11	Fractura ossium	215	159	167	80	26	4	12	31	66	9.11	13.69	9.18	16.48	14.33	5.61	10.38	9.00	10.71
12	Gonorrhea	2,862	1,430	1,853	714	163	13	88	266	717	121.31	123.08	101.90	147.13	89.86	18.23	76.13	77.26	116.40
13	Hernia	73	26	59	18	7	4	2	15	44	3.09	2.24	3.24	3.71	3.86	5.61	1.73	4.36	7.14
14	Influenza	344	104	585	33	46	40	3	65	99	14.58	8.95	32.17	6.80	25.36	56.10	2.60	18.88	16.07
15	Insolatio (Hitzschlag, coup de chaleur)	2	1	.....	.....	1	.....	.....	.....	1	.08	.09	.....	.....	.55	.....	.....	.....	.16
16	Luxationes articulorum	68	60	70	14	2	1	.....	7	14	2.88	5.16	3.85	2.88	1.10	1.40	.....	2.03	2.27
17	Meningitis cerebro-spinalis, epidemica	1	.....	1	.....	.....	.....	.....	1	1	.....	.04	.....	.05	.....	.....	.....	.29	.16
18	Morbilli	107	36	94	14	2	.....	3	12	87	4.54	3.10	5.17	2.88	1.10	.....	2.60	3.49	14.12
19	Parotitis, epidemica	66	33	96	19	2	2	2	7	34	2.80	2.84	5.28	3.92	1.10	2.81	1.73	2.03	5.52
20	Pleuritis	47	29	32	9	10	1	3	11	17	1.99	2.50	1.76	1.85	5.51	1.40	2.60	3.19	2.76
21	Pneumonia crouposa sive lobaris	48	21	38	12	5	4	3	8	11	2.03	1.81	2.09	2.47	2.76	5.61	2.60	2.32	1.79
22	Rheumatismus articulorum	292	95	203	48	16	12	12	40	102	12.38	8.18	11.16	9.89	8.82	16.83	10.38	11.62	16.56
23	Scarlatina	6	.....	2	2	.....	.....	.....	.....	3	.25	.....	.11	.41	.....	.....	.....	.....	.49
24	Scorbutus	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
25	Syphilis	770	386	468	163	45	6	31	67	181	32.64	33.22	25.77	33.59	24.81	8.42	26.82	19.46	29.39
26	Trachoma	9	3	3	.....	.....	.....	.....	2	7	.38	.26	.16	.....	.....	.....	.....	.58	1.13
27	Tuberculosis pulmonum [2]	71	37	45	19	5	.....	2	25	19	3.01	3.18	2.47	3.92	2.76	.....	1.73	7.26	3.08
28	Tuberculosis certerorum organorum	22	5	7	4	4	.....	.....	2	4	.93	.43	.38	.82	2.21	.....	.....	.58	.65
29	Typhus abdominalis	69	15	21	20	11	1	5	5	21	2.92	1.29	1.15	4.12	6.06	1.40	4.33	1.45	3.41
30	Typhus exanthematicus	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
31	Ulcus molle	857	426	472	242	45	1	25	43	181	36.32	36.67	25.96	49.87	24.81	1.40	21.63	12.49	29.39
32	Variola	9	2	.....	2	.....	.....	.....	1	1	.38	.17	.....	.41	.....	.....	.....	.29	.16
33	Morbi auris	183	57	123	25	12	3	2	25	73	7.76	4.91	6.76	5.15	6.62	4.21	1.73	7.26	11.85
34	Morbi cordis [3]	57	22	42	4	2	4	3	6	21	2.42	1.89	2.31	.82	1.10	5.61	2.60	1.74	3.41

35	Morbi cutis [4]	653	294	522	174	65	13	20	41	411	27.68	25.31	28.71	35.86	35.84	18.23	17.30	11.91	66.73
36	Morbi mentis [5]	42	16	25	7	3	....	3	9	9	1.78	1.38	1.37	1.44	1.65	.....	2.60	2.61	1.46
37	Morbi oculi	252	111	208	47	23	7	16	41	138	10.68	9.55	11.44	9.69	12.68	9.82	13.84	11.91	22.40
38	Morbi systemat. urin. et sexual (excluding venerie et syphilis)	293	174	229	75	18	10	13	36	150	12.42	14.98	12.59	15.45	9.92	14.02	11.25	10.46	24.35

[1] Malarial fever, intermittent only.
[2] Includes tuberculosis of the larynx.
[3] Includes pericarditis and endocarditis.
[4] Diseases of the skin proper only.
[5] Insanity only.

INTERNATIONAL TABLE VIII.—*Most important diseases, by months.*

No. of international nomenclature.	Diseases of the international nosological table.	Admissions by months.											
		January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
1	Alkoholismus acutus, including delirium tremens	119	129	132	133	121	135	127	121	147	127	153	154
2	Appendicitis, typhlitis, perityphlitis	24	29	28	30	30	36	33	31	47	36	36	44
3	Bronchitis, acuta	246	280	288	143	135	84	75	107	103	136	170	214
4	Cholera Asiatica							3					
5	Cholera nostras						1			1		1	
6	Diphtheria et croup	8	2	5			4		4	16	11	6	5
7	Dysenteria	33	33	21	22	22	32	46	41	27	35	23	34
8	Erysipelas	5	11	7	7	4	2	1	2	1	2	3	7
9	Febris intermittens (malaria) [1]	134	109	212	155	143	173	182	150	138	114	76	89
10	Febris recurrens												
11	Fractura ossium	71	50	60	64	57	56	72	69	54	78	61	68
12	Gonorrhea	818	741	763	705	735	658	631	596	673	657	563	566
13	Hernia	19	28	21	23	30	24	15	17	23	18	18	12
14	Influenza	190	313	302	166	54	17	17	17	21	19	39	164
15	Insolatio (Hitzschlag, coup de chaleur)						2	2	1				
16	Luxationes, articulorum	29	21	16	21	22	20	23	14	19	19	13	19
17	Meningitis cerebro-spinales epidemica		1	1	2								
18	Morbilli	16	41	166	42	34	23	7	5	7	2	8	4
19	Parotitis epidemica	24	19	49	46	23	36	23	8	6	7	6	14
20	Pleuritis	15	10	10	14	15	6	13	17	21	14	8	16
21	Pneumonia crouposa sive lobaris	19	21	15	14	9	8	5	8	6	8	17	20
22	Rheumatismus articulorum	70	80	119	102	81	57	54	46	58	51	60	42
23	Scarlatina	1	2	2	2	2			1				3
24	Scorbutus												
25	Syphilis	208	169	170	185	201	176	152	159	184	190	171	152
26	Trachoma	5	2	1	2		1	2		4	3	2	2
27	Tuberculosis pulmonum [2]	24	14	17	15	21	11	21	25	24	18	21	12
28	Tuberculosis ceterorum organorum	6	9	5	5	3	3	1	6	3	4	2	1
29	Typhus abdominalis	13	22	12	4	2	7	12	25	22	17	18	14
30	Typhus exanthematicus												
31	Ulcus molle	224	203	199	178	192	167	158	178	190	200	194	209
32	Variola	5			4	2	2						2
33	Morbi auris	52	54	59	44	31	36	38	33	31	26	40	59
34	Morbi cordis [3]	11	15	14	6	15	16	16	11	10	19	14	14
35	Morbi cutis [4]	185	165	183	178	184	190	214	227	169	195	168	135
36	Morbi mentis [5]	8	8	12	10	12	6	8	9	10	10	11	10
37	Morbi oculi	73	74	81	78	75	50	80	67	67	59	63	76
38	Morbi systemat. urin. et sexual (excluding venerie et syphilis)	78	66	103	74	95	91	82	69	84	75	91	90

[1] Malarial fever, intermittent only. [2] Includes tuberculosis of larynx. [3] Includes pericarditis and endocarditis. [4] Diseases of the skin proper only. [5] Insanity only.

INTERNATIONAL TABLE IX.—*Deaths, by rank, by length of service, and by age.*

Causes of death.	Total number of deaths (enlisted men).		Deaths by rank and length of service.				Deaths by age.					
	Absolute numbers.	Per 1,000 of mean strength.	Noncommissioned officers.	Soldiers in first year of service.	Soldiers in second year of service.	Soldiers in third year of service and beyond.	20 and under.	21 to 25.	26 to 30.	31 to 35.	36 to 40.	41 and over.
Deaths from sickness:												
Soldiers present with troops	122	1.70	40	10	11	61	3	37	24	14	20	24
Soldiers absent from troops	53	.74	19	4	2	28	1	12	7	10	10	13
Accidental deaths: [1]												
Soldiers present with troops	70	.97	12	5	13	40	5	33	16	5	5	6
Soldiers absent from troops	44	.61	3	1	9	31	2	14	18	8	1	1
Suicides:												
Soldiers present with troops	20	.28	6	1	3	10	....	6	3	5	4	2
Soldiers absent from troops	11	.15	2	3	....	6	1	3	2	3	....	2
Grand total	320	4.46	82	24	38	176	12	105	70	45	40	48

[1] Includes 16 homicides.

INTERNATIONAL TABLE X.—*Discharges from the Army for physical disability, temporary or permanent, by rank, length of service, and by age.*

Causes of discharge.	Total discharges (enlisted men).		Rank and length of service.				Age.					
	Absolute numbers.	Per 1,000 of mean strength.	Noncommissioned officers.	Soldiers in first year of service.	Soldiers in second year of service.	Soldiers in third year of service and beyond.	20 and under.	21 to 25.	26 to 30.	31 to 35.	36 to 40.	41 and over.
Physical disability existent prior to enlistment	251	3.50	6	147	56	42	32	149	49	19	2	....
Physical disability incident to service	593	8.26	92	79	138	284	29	242	163	85	38	36
Physical disability not incident to service	163	2.27	7	44	44	68	9	77	46	17	13	1
Grand total	1,007	14.02	105	270	238	394	70	468	258	121	53	37

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